

AD-A269 065



R.L.
(2)

NAVAL POSTGRADUATE SCHOOL
Monterey, California



DTIC
ELECTE
SEP 09 1993
S B D

THESIS

**THE EFFECT OF THE IMMIGRATION OF SOVIET JEWS TO
ISRAEL ON ISRAEL'S ECONOMY AND HUMAN
RESOURCES**

by

Israel Shafir

June, 1993

Thesis Advisor:

Roger D. Evered

Approved for public release; distribution is unlimited.

93-20912



93 9 08 09 6

Unclassified

Security Classification of this page

REPORT DOCUMENTATION PAGE

1a Report Security Classification: Unclassified			1b Restrictive Markings		
2a Security Classification Authority			3 Distribution/Availability of Report		
2b Declassification/Downgrading Schedule			Approved for public release; distribution is unlimited.		
4 Performing Organization Report Number(s)			5 Monitoring Organization Report Number(s)		
6a Name of Performing Organization Naval Postgraduate School		6b Office Symbol (if applicable) *36	7a Name of Monitoring Organization Naval Postgraduate School		
6c Address (city, state, and ZIP code) Monterey CA 93943-5000			7b Address (city, state, and ZIP code) Monterey CA 93943-5000		
8a Name of Funding/Sponsoring Organization		8b Office Symbol (if applicable)	9 Procurement Instrument Identification Number		
Address (city, state, and ZIP code)			10 Source of Funding Numbers		
			Program Element No	Project No	Task No
			Work Unit Accession No		
11 Title (include security classification) THE EFFECT OF THE IMMIGRATION OF SOVIET JEWS TO ISRAEL ON ISRAEL'S ECONOMY AND HUMAN RESOURCES					
12 Personal Author(s) ISRAEL SAHAFIR					
13a Type of Report Master's Thesis		13b Time Covered From To	14 Date of Report (year, month, day) June 1993	15 Page Count 123	
16 Supplementary Notation The views expressed in this thesis are those of the author and do not reflect the official policy or position of the Department of Defense or the U.S. Government.					
17 Cosati Codes			18 Subject Terms (continue on reverse if necessary and identify by block number)		
Field	Group	Subgroup	Immigration, Israel, Jews, Economy, Human Resources, Strategy, Vision		
19 Abstract (continue on reverse if necessary and identify by block number)					
<p>This thesis investigates the expected effects of the 1990s immigration wave of Jews from the former USSR to Israel in terms of the economic and social aspects. The influx of some 500,000 immigrants has incremented Israel's population by some 10 percent in three years. The immigrants' human capital is considered exceptionally high in educational and occupational terms. It can give Israel a labor force of unparalleled quality assuming it will not be wasted.</p> <p>The Israeli economic structure is heavily regulated and lacks incentives for entrepreneurialism. The challenge facing Israel is to transform its economic political and social structure so it is geared toward harnessing the special opportunity accorded by the immigrants.</p> <p>In the fast changing global market, capitalizing on the immigrants characteristics is a key for Israel's success. The immigrants pose a burden as well in the form of public debt to be incurred by the veteran population in the near future for their successful assimilation. Israel's ability to find the right approach to their absorption depends on its ability to forge a strategic vision for the future and follow it to implementation.</p>					
20 Distribution/Availability of Abstract __ unclassified/unlimited __ same as report __ DTIC users			21 Abstract Security Classification Unclassified		
22a Name of Responsible Individual Roger D. Evered			22b Telephone (include Area Code) (408) 656-2646	22c Office Symbol AS/Ev	

Approved for public release; distribution is unlimited.

THE EFFECTS OF THE IMMIGRATION OF SOVIET JEWS TO ISRAEL ON ISRAEL'S
ECONOMY AND HUMAN RESOURCES

by

Israel Shafir

Lieutenant Colonel, Israeli Air Force

Submitted in partial fulfillment
of the requirements for the degree of

MASTER OF SCIENCE IN MANAGEMENT

from the

NAVAL POSTGRADUATE SCHOOL

June 1993

Author:

I. Shafir

Israel Shafir

Approved by:

Roger D. Evered

Roger D. Evered, Thesis Advisor

Greg Hildebrandt

Greg Hildebrandt, Second Reader

David R. Whipple

David R. Whipple, Chairman

Department of Administrative Sciences

ABSTRACT

This thesis investigates the expected effects of the 1990s immigration wave of Jews from the former USSR to Israel in terms of the economic and social aspects. The influx of some 500,000 immigrants has incremented Israel's population by some 10 percent in three years. The immigrants' human capital is considered exceptionally high in educational and occupational terms. It can give Israel a labor force of unparalleled quality assuming it will not be wasted.

The Israeli economic structure is heavily regulated and lacks incentives for entrepreneurialism. The challenge facing Israel is to transform its economic political and social structure so it is geared toward harnessing the special opportunity accorded by the immigrants.

In the fast changing global market, capitalizing on the immigrants characteristics is a key for Israel's success. The immigrants pose a burden as well in the form of public debt to be incurred by the veteran population in the near future for their successful assimilation. Israel's ability to find the right approach to their absorption depends on its ability to forge a strategic vision for the future and follow it to implementation.

Accession For	
NTIS GRA&I	<input checked="" type="checkbox"/>
DTIC TAB	<input type="checkbox"/>
Unannounced	<input type="checkbox"/>
Justification	
By	
Distribution/	
Availability Codes	
Dist	Avail and/or Special
A-1	

TABLE OF CONTENTS

I. INTRODUCTION	1
II. ISRAEL'S ECONOMY - AN OVERVIEW	3
A. A COUNTRY OF IMMIGRANTS	3
B. THE POLITICAL ORIENTATION	3
C. TIES WITH WORLD JEWRY	5
D. THE HOSTILE ENVIRONMENT	5
E. PATTERNS OF PRODUCTION	7
F. EDUCATION	9
G. LABOR	9
H. TRANSPORTATION AND COMMUNICATION	10
I. COMMERCE AND TRADE	10
J. TOURISM	11
K. IMMIGRATION AND PRODUCT	11
L. ROLE OF GOVERNMENT	16
III. SOVIET JEWRY CHARACTERISTICS	19

A.	CAUSES OF SOVIET JEWISH IMMIGRATION IN THE 90'S	19
1.	SOVIET IMMIGRATION POLICY	19
2.	SOVIET POLITICAL STRUCTURAL PROBLEMS	20
3.	SOVIET ECONOMY	20
4.	ANTI-SEMITISM	20
B.	POPULATION ACCUMULATION	21
C.	SIZE OF HOUSEHOLD	24
D.	AGE STRUCTURE	24
E.	LEVEL OF EDUCATION	25
F.	LABOR FORCE PARTICIPATION	26
G.	OCCUPATIONAL COMPOSITION	27
H.	CAPITAL IMPORTS	29
IV.	ECONOMIC OPENING CONDITIONS FOR ABSORPTION	30
A.	EFFICIENCY MEASURES	30
B.	INVESTMENT AND INFRASTRUCTURE DEVELOPMENT .	31
C.	SCIENCE AND TECHNOLOGY	35
1.	RESEARCH AND DEVELOPMENT	35
2.	ACADEMICALLY TRAINED PERSONNEL	36
D.	STRUCTURAL REFORM	37
E.	PRIVATIZATION	39

F.	REFORMS IN THE FINANCIAL MARKETS	39
G.	BALANCE OF PAYMENTS	40
H.	INCREASES IN LABOR SUPPLY AND RISING UNEMPLOYMENT	42
I.	DISTRIBUTION OF EMPLOYMENT BY INDUSTRIES AND OCCUPATIONS	43
J.	FLEXIBILITY OF THE WAGE SYSTEM	44
V.	THEORY OF ECONOMICS OF IMMIGRATION AND ITS APPLICABILITY	46
A.	LABOR FORCE PARTICIPATION	47
B.	UNEMPLOYMENT	48
C.	JOB DISPLACEMENT	49
D.	OCCUPATIONAL SUBSTITUTION	51
E.	FERTILITY	57
F.	MORTALITY	58
G.	EARNINGS COMPARISONS	58
H.	MOBILITY	59
I.	PROPENSITY TO START NEW BUSINESS	59
J.	CHILDREN OF IMMIGRANTS	60
K.	CRIME	60
L.	EFFECTS OF IMMIGRANTS ON PUBLIC COFFERS	61

M.	EFFECT OF IMMIGRANTS THROUGH DILUTION OF PRODUCTION CAPITAL	63
N.	HUMAN CAPITAL EXTERNALITIES	65
O.	IMPACT UPON NATURAL RESOURCES AND THE ENVIRONMENT	66
P.	CONCLUSION	67
VI	IMMIGRATION ABSORPTION 1989-1992 THE POLITICAL, ECONOMIC AND CULTURAL ATTRIBUTES	70
A.	THE POLITICAL ASPECT	71
B.	THE ECONOMIC ASPECT	75
C.	THE CULTURAL ASPECT	78
VII	PROJECTION OF ECONOMIC AND SOCIAL PERFORMANCE ..	83
A.	PUBLISHED PLANS	83
B.	ECONOMIC POLICY PLANS	84
C.	BUDGET PLANS	86
D.	STRUCTURAL CHANGES	86
E.	MONETARY POLICY	87
VIII	PROPOSITION FOR STRATEGIC PLANNING	88
A.	STRENGTHS	89

1. EDUCATION LEVEL	89
2. OCCUPATIONAL COMPOSITION	90
3. KNOWLEDGE MARKET ENVIRONMENT	90
B. WEAKNESSES	91
1. ECONOMIC STRUCTURE	92
2. THE POLITICAL SYSTEM	93
3. SECURITY	94
4. GEOGRAPHICAL SEGREGATION	95
C. OPPORTUNITIES-THE CHANGING GLOBAL ECONOMY ..	95
D. THREATS	97
E. A VISION	98
F. PROPOSED STRATEGY	102
G. CONCLUSION	106
LIST OF REFERENCES AND BIBLIOGRAPHY	107
INITIAL DISTRIBUTION LIST	114

I. INTRODUCTION

The State of Israel was established to be a national home for the Jewish people. Towards this end, the founders of Israel proclaimed in its Declaration of Independence that; "...the Jewish State in the land of Israel...will open wide the gates of the homeland to every Jew...".

True to the Zionist vision and its perceived historic mission, Israel has absorbed over two million immigrants from the time of its inception in 1948 to the beginning of the current wave of immigration from the former Soviet Union in 1989. The evolution of the Zionist movement and the previous absorption experience have profoundly affected the Israeli economy. It is a highly regulated, government controlled economy which turned from being a supposed asset at the country's beginning stage to a liability, in the quest for economic development in the 90s. The characteristics of the present wave of immigration of some 500,000 people poses a great challenge and an opportunity for the Israeli economy and society to emerge from this experience as a vitalized "David" (in the sense of being a small agile high-tech oriented economy), lifting itself to a prominent place within the industrialized countries. The challenge calls for Israel to effect a structural change in its economy and accept the resulting social changes which will inevitably lead to political and maybe geo-political strategic realignment in Israel and the Middle east.

This thesis investigates the expected effects of the immigrants on the Israeli economy and society. The purpose of this analysis is to examine how the immigrants' characteristics could be used to enhance the Israeli economy by way of strategic restructuring.

II. ISRAEL'S ECONOMY - AN OVERVIEW

This chapter presents an overview of the Israeli economy with an emphasis on the role immigration has played in the process of economic development from 1919.

A. A COUNTRY OF IMMIGRANTS

Israel is a country established for and run by immigrants from diverse countries and backgrounds. Its *raison d'être* is to gather, retain, and forge these immigrants into one nation. Preventing splits along lines of origin was, and still is a major objective in Israel's development as a welfare state, and discouraging emigration is a constraint on economic policy. The early immigrants' ideologies and aspirations, and the institutions created to achieve them, have had a lasting effect on the country's social and economic structure. In particular they have had a marked effect on the role assumed by Israeli governments.

B. THE POLITICAL ORIENTATION

The political orientation of the leaders of the Zionist movement affected their perceptions of the role of the administration (be it governmental or quasi formal institution), in regulating and controlling the economy. Most of the leaders had come to 'Palestine' on the wave of radical socialism which swept

Europe, and East European intelligencia in particular. The waves of immigration of idealistic Jews seeking to find refuge from racial persecution in Europe came to the middle east and established communes, known as Kibbutz, which essentially enabled them to survive through effort-pooling and a very low standard of living. Work was centrally organized and workers were rotated on shifts to equate their hardships. Little room was left for personal needs outside of what was approved by the main consensus. Practically everything was decided upon through central meetings in which ideological and personal issues were defined. Regulations were subjected to strict political party line doctrine. Any deviation was subdued and could be a cause for ousting an individual from the community, and subsequently from the socialist party. As a result several factions emerged. None the less most were housed under the roof of a central coalition which was the quasi-governmental institution prior to the declaration of independence in 1948. By no means did the Kibbutzim (pl. of Kibbutz) constitute the majority of the population, but their role as paradigm makers for the society cannot be overemphasized. The importance of the socialist zionist movement was so profound, that it came to dominate the strategic thinking of the elite. In conjunction with the recurring waves of immigrations the socialist philosophy of government central planning, resource allocations was unchallenged for decades.

C. TIES WITH WORLD JEWRY

Immigration is one aspect of a broader affinity with Jews world wide. This strong and lasting relationship has concrete implications for the country's resources and its balance of payments. As a haven for survivors of the Holocaust, Israel received German reparations at a crucial stage in its economic development, during the huge immigration wave of the 50s. Transfers from world Jewry have been Israel's most consistent source of external financing. This aid, which is especially responsive to emergencies, provides a safety net. Large funding drives were of particular importance in both wars of 1967 and 1973 (the 'Six Days war' and 'Yom Kippur war' as they have come to be known), and the Soviet Jewish immigration wave at present. These ties were instrumental in forming the close economic and political links between Israel and the United States, which have affected life in Israel in many ways.

D. THE HOSTILE ENVIRONMENT

Perceiving a threat to its survival, Israel devoted an increasingly large share of its resources to defense and to conducting economic and social activities in the context of constant preparedness for overt and covert hostilities. Existence in a hostile environment isolated Israel from adjacent economies and obstructed - until very recently - economic relations with countries in the former eastern block and parts of the third world. In addition, an economic boycott of potential western trade partners by Arab countries

affected economic performance as well. Israel's resource allocation to defense is probably the highest in the world as a percent of G.N.P.

There are also hidden costs associated with Israel's defense in the form of comparatively high quality and quantity of manpower devoted to the military. The reserve duty taxation of the civilian sector is also a heavy burden in the actual productive loss and the disruptive nature of spending some 30-60 days a year on military duty. An important though somewhat unquantifiable phenomenon is that the elite reserve men who serve as combat officers and troopers (whose average reserve duty is higher) constitute a high percentage of the economic, social and academic elite.

Table 2.1 presents the defense burden from 1950 to 1990.

The table shows an exceptionally high expenditure on defense, but a shift down during the latter part of the 80s owing to the relative feeling of security regarding an imminent total attack on Israel by its neighbors. This can be attributed in part to the peace with Egypt and the relative weakness of Israel's main adversary - Syria. The defense expenditure can be expected to drop further in accordance with the easing of international and regional tensions, and the decline in Iraqi potential military threat.

TABLE 2.1

DEFENSE SPENDING AS A PERCENT OF GNP

Year	Defense consumption, % of GDP
1950-1955	9.0
1957-1966	10.2
1968-1972	22.1
1974-1976	30.4
1977-1981	22.4
1982-1984	19.0
1985-1990	16.7
1991	13.8

* Excluding years of war

Sources: CBS, Monthly Bulletin Supplement 6/1982 and abstract, 1991.**E. PATTERNS OF PRODUCTION**

In most respects Israel's economic structure resembles that of industrial European countries. Commerce and banking, transportation and communication, and personal and government services account for over half of its national product. The high percentage is due to several reasons, the most important of which is the immigrant's preference for their traditional occupation[Ref. 1]. Immigrants to Israel were Jews who were not allowed to enter into many occupational fields in their countries of origin. Their insecurity led them to easily transferable and mobile occupations, and

as a result of this and other reasons, they typically engaged in commerce, banking, medical profession and the like.

Agriculture: Agriculture employs about 5% of the labor force and is responsible for an equal share of the G.N.P. Israel's agriculture provides almost all the food needs of the country with export surplus roughly offsetting imports. Agriculture in Israel is one of the most technologically advanced in the world through effective use of centralized production methods (namely communal farming methods), and high valued manpower employed in that field. (The education level of those employed in agriculture is probably the highest in the world. The explanation being that the Zionist paradigm called for the immigrants to employ themselves in agriculture. The paradigm still has an effect on labor preferences).

Industry: Industry employs almost a third of the labor force and generates about the same proportion of GNP. The major enterprises are electronics, aviation, diamond polishing, food products, construction, textiles, machine and metal products, chemicals, rubber and plastics.

In spite of the lack of natural resources and the dependence on imports for raw material (especially energy resources) Israel was able to diversify considerably, and has been able to sell its goods in the world markets.

F. EDUCATION

Education in Israel is mandatory and free for the first 13 years. Expenditure on education is about 8.7 percent of GDP. University level education is considered of a very high standard by international comparison and is highly subsidized. The rate of graduates entering the labor force has not been equaled by job opportunity growth rate and as result many veteran Israelis have emigrated, mainly to the United States. This brain drain is a severe constraint on Israel's economy in the form of acceptable policy measures.

Between 1975-1990 the number of students increased by 35 percent. In contrast student enrollment, between 1990-1996 is expected to increase by 40 percent due to structural age changes and the immigration[Ref. 2].

G. LABOR

Virtually all workers in Israel are Unionized. The main union - the Histadrut- embraces 70% of the total work force. This has led to an integrated national wage system. The trade unions provide extensive services such as health care, child care and other services. This gives them virtual veto power in negotiations with the government over wage, labor, and general economic policy decisions.

Wage levels in the Israeli market tend to demonstrate an attribute of inflexibility. This is caused by an imbalance between the trade unions and the private sector in which the former dictated labor policy and wages to the latter.

Unemployment was kept at a tolerable low rate as all governments have been aware that social unrest as a result of high unemployment would undermine prospects of immigration and would stimulate emigration[Ref. 3].

H. TRANSPORTATION AND COMMUNICATION

Israel inherited a relatively good infrastructure from the British investments at the pre-state period. Extensive improvements were made to accommodate the growing population and structural changes to industry. However, the infrastructure development is lagging and suffers from under investment in the last decade (see table 4.1 in Chapter IV). Since Israel depends on sea and air routes for its external communication due to its inability to use land routes, the government has vested interests and shares in both El-Al the main air carrier, and Zim, the main sea carrier.

I. COMMERCE AND TRADE

Domestic trade is well developed and is characterized by many large scale cooperatives as well as small retailers. Israel is a very active participant in international trade, but for most of its existence it has maintained a trade deficit financed by borrowing and funds from abroad. Israel main trade

partners are the United States and the European Common Market countries. As of late an effort was made to diversify the trading partners to include the far east and the CIS.

J. TOURISM

Tourism is fairly well developed in Israel. Its cultural, archeological and religious attractions coupled with favorable climate make it a favorite destination to various groups, mainly Jews. The unstable security situation makes tourism somewhat unpredictable, but none the less, some one million tourists arrive each year contributing substantially to the economy. Fiscal figures for 1989 were \$1.8 billion which was about 4.2 percent of the GNP with an added value of 85 percent (an added value leader among export industries).

K. IMMIGRATION AND PRODUCT

In 1919 the Jewish population in Palestine (which was then under British mandate) was 57,000[Ref. 4]. 95,600 arrived in 1920-1926, adding 9-15 percent to the population each year (28.3 percent in 1926 alone). In 1932 the Jewish population was 175,000; 147,000 immigrants arrived in 1933-1935, adding 17-20 percent annually and another 30,000 came in 1936.

In the quarter century before 1948 the Jewish population increased eight fold with the population doubling on the average each decade and reached approximately 650,000 by the end of that period.

Immigrants of the pre state years were highly educated and motivated. Many of the immigrants came with substantial monetary capital which helps to explain the outstanding economic performance at the time (see Table 2.2).

From mid 1948 to the end of 1951 687,000 immigrants arrived with the population more than doubling to 1.4 million. In the next two decades it redoubled growing 47 and 35 percent respectively. The influx of the 1950s wave of immigration was comprised of individuals with different demographic and economic background. The immigrants were less educated and had arrived with virtually no material possessions.

The 1970s marked the end of an exceptionally high and sustained period of population growth, with an increase of 26 percent for the decade. Over the period of 1948-1982, the Jewish population grew from 650,000 to 3.4 millions with immigration contributing 1,385,000.

From 1950 to 1982 total product increased eleven fold and capital stock sixteen fold. Product tripled in the first decade and doubled in the second but from 1972 to 1982 total product increased by only 37 percent. Per capita income increased at an annual rate of 4.8 percent in the British mandate period and 5.2 in the 1951-1972 period. (data for 1948-1950 is less reliable) In contrast it grew only 0.8 percent in the period 1972-1982.

Figure 1 shows the correspondence between the ratio of immigrants to mean Jewish population and the growth rate of GNP. The correlation is .72 in both the mandate and the state periods. The aggregate relationship between

immigration and economic growth are seen through the correspondence of immigration and growth of capital stock as well[Ref. 5] .

Table 2.2 shows the relationships of different growth criteria in relation to immigration.

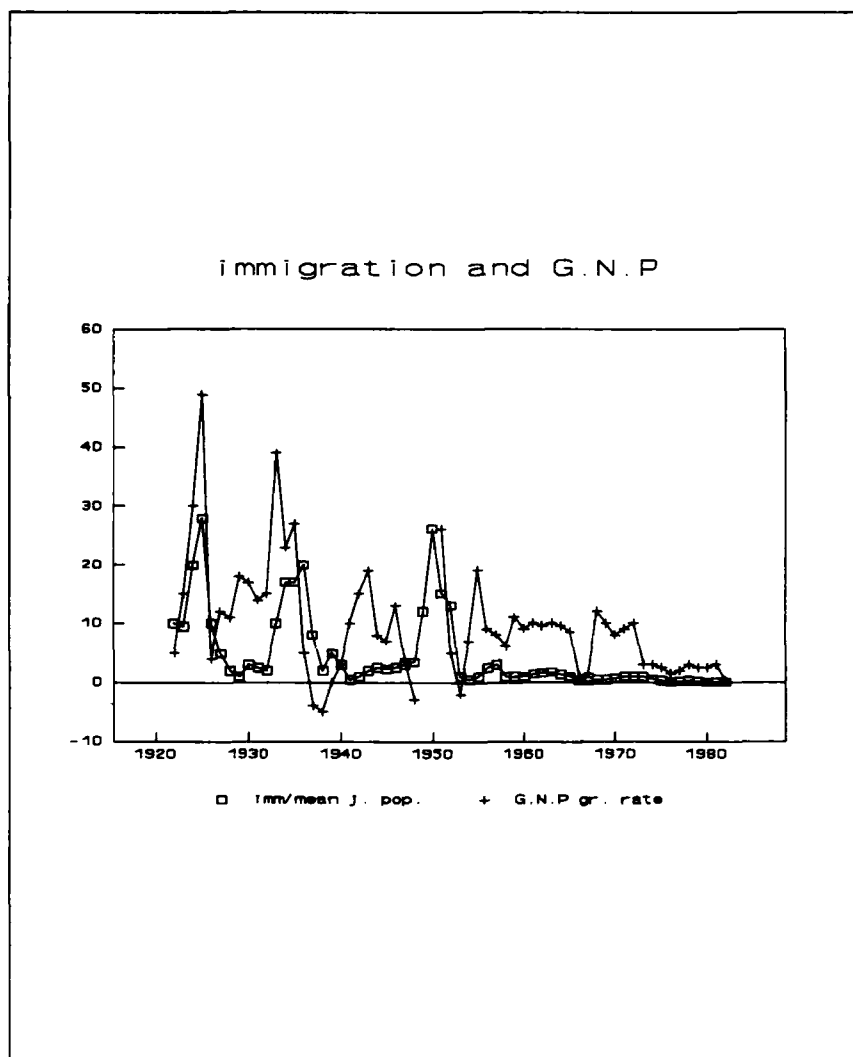


Figure 1
 Immigration and growth of GNP, 1922-1982
 Source; Yoram Ben Porath, *The Israeli Economy; Maturing Through Crisis*, p. 29, Harvard University Press, 1986

TABLE 2.2
Economic Growth, 1922-1990*

		Annual rates of increase		Capital stock		
		GNP	GNP/Capita	Total	Dwell- ing	Non- dwelli ng
1922-1932	8.2	17.6	7.8	13.7		
1932-1947	6.4	11.2	3.0	9.8		
1947-1950	19.8					
1950-1951	13.2	29.7	10.0			
1951-1964	2.2	9.1	4.9	12.3	11.6	12.8
1964-1972	1.3	8.9	5.5	8.4	7.7	8.7
1972-1982	0.9	3.2	0.8	6.7	7.7	6.1
1982-1989	0.5	3.2**	1.7**	3.1	3.4	3.0
1990	5.1	5.1**	-0.2**	2.8	3.5	2.3

* Refers to the Jewish economy in Palestine until 1947 and to the Israeli economy thereafter.

**GDP and GDP/Capita.

[Sources for Table 2.2: For 1922-1982: Y. Ben-Porath "The Entwined Growth of Population and product, 1922-1982" in Y. Ben-Porath (ed.) The Israeli Economy: Maturing Through crisis. Harvard University press, 1986. For 1982-1990: CBS, Abstract, 1991; and Bank of Israel, Annual report, various years]

The trends visible in the data are of correlated increases of GNP and GNP/Capita with population growth. Similar comparisons in the United States show equally discernable trends (Kuznets and rubin (1954) and Kuznets (1958)).

L. ROLE OF GOVERNMENT

One of the most important features of Israel's economy is the central role played by the government in its wide interpretation. That includes local government, the Jewish Agency and the Jewish National Fund (bodies engaged in settlement of immigrants and purchase of land). The government owns such enterprises as railways, post office, telephone services, and has carried out extensive public works. It also owns more than half the shares of over 100 corporations engaged in commercial activities such as production of electricity and exploitation of natural resources. Altogether the government and its various undertakings generate about 25% of the national product. Since the Histadrut (the Israeli federation of labor), through its holding company generates a similar share, private enterprise is the source of only about a half of the GNP.

The government has also been responsible for the major financing of capital investment. In the first 10 years of the statehood [1948-1958], the government was the source of 50 to 80 percent of total domestic investment. It exerts additional influence through various monetary control, very high

taxation, subsidies and direct allocations. All these make government activity the axis of the economy and endow it with the means of affecting to a high degree every day life and well being of the citizens.

Governmental involvement in the economy has depended less on the political philosophy of any particular governing party coalition, and more on the underlying tasks facing all of Israel's governments: absorption of immigrants, economic development, and meeting national defense needs.

The highly regulated economy can be thought of as having several underlying reasons; the ideological, pragmatic and psychological.

The socialist orientation and concurrent visions of resource allocations, have penetrated deep into the Israeli mindset. As the early 'Workers' Unions' took the roles of political leadership and later became formal governing bodies they brought with them their early ideologies. It was extremely difficult for a society which had no previous independent experience to forego the methods which through centralization and effort pooling brought about the creation of the state. As immigration waves continued and economic hardships followed, it was only natural to continue policies which worked in the past and secured perceived economic success without compromising equity issues.

The pragmatic reason was the imminent security threat hovering above Israel's existence. The extent of resource allocations to defense required centralization and regulation. Ensuring adequate manpower enlistment both in the regular and reserve military units allowing for rapid deployment was

paramount. Infrastructure development had to align with the requirement for rapid mobility of forces, to and from different theaters of battle. Industrial production was to allow for military hardware output should an embargo persist (as has been the case until this day).

A different point, which is more of the psychological nature, is the historical paradigm haunting Jews throughout the ages. Ever since the biblical times up to the holocaust in WW-II, Jews perceived their vulnerability as stemming from their inability to organize their political and military powers to resist threats. This perception leads to a consensus on the need to rally around the flag in times of danger.

Thus we see several elements which lead to expectations and policies of centralized and regulated planning. This includes both the economic and social realms. Chapter VIII will deal with the changes necessary to change the centralization paradigm.

III. SOVIET JEWRY CHARACTERISTICS

This chapter will discuss the causes of the mass immigration and special characteristics of the immigrants from the former Soviet Union. Two striking facts stand out and merit emphasis. One being their level of education which is extraordinarily high by any standard - some 57 percent of immigrants have post-secondary education and some 16 percent have studied for 16 years or more. The other, their lack of Jewish identity which can be expected to affect their socialization processes.

A. CAUSES OF SOVIET JEWISH IMMIGRATION IN THE 90'S

The collapse of communism in the former Soviet Union and Eastern Europe has had ripple effects on the lives of hundreds of millions of people. Destabilization in the political economic and social structures in those areas, coupled with long subdued undercurrents of ethnic unrest caused waves of migrations within and out of the former Soviet block.

The migration of Jews from the former USSR is a result of several factors.

1. SOVIET IMMIGRATION POLICY

In 1989 then President Gorbachev changed the binding rules of immigration, allowing a large exodus of Jews with few if any restrictions on the potential immigrants. Along with his concurrent policy of 'Glasnost' he was

trying to appeal to western support in a desperate attempt to save the Soviet economy from crumbling.

2. SOVIET POLITICAL STRUCTURAL PROBLEMS

With the deterioration of the Soviet political infrastructure the threat to exit visa seekers in terms of abuse and harassment - typical in previous years - declined considerably. In the past, a visa applicant risked his economic security and job retention without a sound probability that his exit will be permitted. It was almost ignored by 1989 as the political and internal security police attended to other problems - mainly their own survival.

3. SOVIET ECONOMY

By 1989 the Soviet economy was deteriorating at a rate which signalled an imminent crisis. As food prices and general inflation increased, the Jews anticipated that their well being will be jeopardized as parts of the population and in their special capacity as Jews being restricted to certain occupational fields by the Soviet system.

4. ANTI-SEMITISM

The economic, social and ethnic situation in the former Soviet Union generated anti-semitic attitudes throughout the country, but particularly in the Russian Republic. Anti-semitic papers with large circulation were freely distributed, and their propaganda was becoming more extremist, with accusations against Jews - of economic, ideological and political nature - with

strong religious overtones. In many Russian cities, painting on walls of anti-semitic slogans and swastikas had become common.

Islamic fundamentalism was causing concern among Jews in the relevant republics, of impending hostilities generated by local ties with hostile Arabs. As an example, in Georgia by 1991, all cooperation between the government and the Jewish Agency (a quasi official Israeli agency which deals with Jewish immigration worldwide) has been stopped. It was due to the apprehension of that Republic's president that such cooperation may be regarded as pro-Israeli policy by the Arab states [Ref. 6]

By the end of 1989 the Soviet Jewry was in a position of physical and mental readiness to leave. Israel has furnished the infrastructure within the Soviet Union (via the Jewish Agency) to process the visa applicants and make arrangements for their transit to Israel. Israel has also promoted Jewish education and Hebrew language tuition throughout local communities in the former USSR.

B. POPULATION ACCUMULATION

Israel's population growth was characterized by large waves of refugee oriented immigrants. Between 1949-1951 the population doubled from 600,000 to 1,200,000 by incorporating Jews from Middle Eastern countries, mainly Iraq and Morocco. In the 60s the immigration was mainly from Romania and in the

early 70s some 100,000 came from the former U.S.S.R. Figure 2 Shows the population accumulation in Israel from 1920 to 1990 [Ref. 7].

The current wave of immigration totals about 500,000 people (as of 1993). As with most of the previous immigration waves the material assets with which the immigrants arrive are negligible and constitute difficulties which will be discussed in later chapters.

The rate of monthly immigration decreased in 1991. The slowdown was due to the Gulf war and the absorption difficulties in Israel (These will be discusses in Chapters V and VI). The rate decreased further in 1992 as the immigrants related their problems to other potential immigrants. Figure 3 shows the immigration rates from January 1990 to September 1992[Ref. 8].

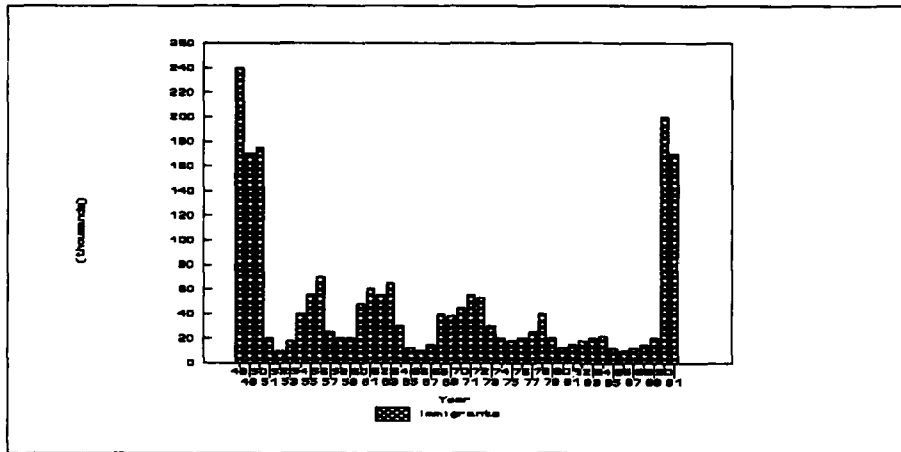


Figure 2
Immigration to Israel, 1948-1992

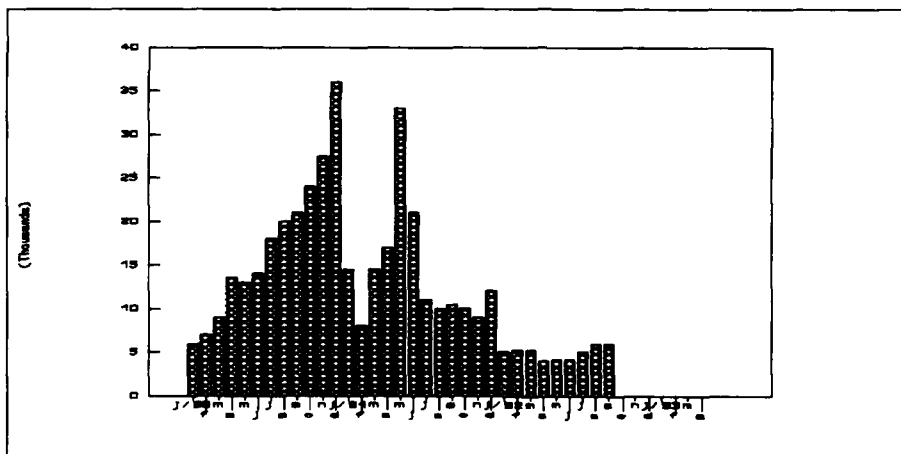


Figure 3
Current immigration to Israel,
1990-1993

C. SIZE OF HOUSEHOLD

Immigrants from the former Soviet Union have a particularly high proportion of singles and childless couples. As a result, the average immigrant household numbers 2.3 persons, in contrast to the average Israeli household which in 1989 numbered 3.6 persons.

TABLE 3.1
ISRAELI POPULATION AND IMMIGRANTS FROM THE FORMER USSR:
HOUSEHOLDS BY SIZE (PERCENTAGES)

No. of persons	1	2	3	4	5	6+
Israeli population 1989	15.5	22.1	13.4	17.5	16	15.5
Immigrants from the U.S.S.R in the '90s*	37.1	26.4	19.6	13.1	2.2	1.6

Average Persons per household - Israeli population - 3.62

- Immigrants 1990* - 2.27

Average, (excluding singles) - Israeli population - 4.11

- Immigrants 1990* - 3.00

* From Jan. 1990 to Sep. 1991.

Sources: CBS, Abstract, 1990; and Ministry of Absorption bulletin

D. AGE STRUCTURE

The immigrant population from the former Soviet Union is older than the absorbing population. Only about one fifth of the immigrants are children under the age of 14, compared with 32 percent of the Israeli population of 1989. In contrast the senior population of over 65 is 14 percent of the immigrants compared with 9 percent of the indigenous population.

This structure will have an effect on the social services systems more in the form of health care and less in the educational field. Another attribute of

the age structure is that a large percentage of the immigrant population are potential entrants to the work force; (and therefore will contribute to the tax revenue and social security, partially offsetting the burden by the older immigrants who are automatically entitled to all social benefits).

TABLE 3.2
ISRAELI POPULATION AND IMMIGRANTS FROM THE FORMER USSR,
BY AGE (PERCENTAGES OF TOTAL POPULATION)

Age	Israeli population, 1989	Immigrants, USSR, 90s*	Immigrants, USSR, '70s**
0-5	13.2	7.0	6.7
6-14	18.6	13.2	16.0
15-18	7.6	5.5	9.8
19-24	9.9	8.0	9.8
25-44	27.3	31.9	27.4
45-64	14.5	20.5	20.9
65-74	5.2	9.0	6.7
75+	3.8	4.9	2.7

* From Jan. 1990 to sep. 1991

** From 1970 to 1983

Source: CBS, Abstract, 1990; and Ministry of Absorption

E. LEVEL OF EDUCATION

The education level of the immigrants from the Soviet Union, based on the number of years of schooling, is higher than that of the Israeli population. Some 57 percent of immigrants have post-secondary education and some 16 percent have studied for 16 years or more. Among the Israeli population the corresponding relative shares are 24.6 and 10.5 percent respectively.

TABLE 3.3
ISRAELI POPULATION AND IMMIGRANTS FROM THE FORMER USSR,
AGED 15+, BY YEARS OF EDUCATION (PERCENTAGES)

	Israeli population 1989		Immigrants from the USSR	
Years of Education	Total	Jews	In the 90s*	In the 70s**
0-4	8.9	6.7	2.2	12.3
5-8	17.2	14.6	9.1	24.4
9-12	49.3	51.1	31.6	31.0
13-15	14.1	15.6	40.7	18.8
16+	10.5	12.0	16.4	13.5

* From Jan. 1990 to Sep. 1991

** From 1970 to 1983

Source: CBS, Abstract, 1990; and Ministry of Absorption.

F. LABOR FORCE PARTICIPATION

Some 80 percent of the immigrants are of working age (+15) compared to 68 percent of the Israeli population. Their rate of participation in the labor force, particularly among women, is high. Based on the experience of previous waves of immigration from the Soviet Union the overall participation rate is above 60 percent, compared to 52 percent among veteran Israelis. As a result, close to half of all immigrants can be considered potential additions to the labor force, compared to only a third of the absorbing population[Ref. 9].

G. OCCUPATIONAL COMPOSITION

The occupational composition of the immigrants is characterized by a high proportion of academics and those in the technical, engineering and medical professions, differing significantly from the Israeli labor force; some 25 percent of the immigrants are engineers and architects as opposed to 2 percent of the Israelis; 15 percent are technicians, compared to 4 percent; and 12 percent are in the medical field, compared to 4 percent.

Occasionally the formal classification of occupations does not reflect educational level and practical experience according to western criteria (as is often the case with physicians who lack skills which makes many of them ineligible for work as physicians in an Israeli medical establishment). It may also be too general and covers specific specializations which have no immediate use in Israel (an example would be the large numbers of mining engineers who find that Israel has no mining industry at all, for lack of natural resources). In both cases additional training and adaptation are required, prolonging the time elapsing before the immigrants can join productively in the economic activity.

TABLE 3.4
ISRAELI POPULATION AND IMMIGRANTS FROM THE FORMER USSR,
OCCUPATIONAL DISTRIBUTION (PERCENTAGES), AGE 15+

	Israeli population	Immigrants from the USSR	
	1989	90s*	70s**
PROFESSIONAL			
Science graduates	0.5	1.6	1.1
Engineers and architects	1.9	25.0	14.0
Physicians	1.1	6.3	6.8
Pharmacists and veterinarians	0.2	0.6	0.3
Social Science and art graduates	1.8	5.6	3.3
post primary teachers	2.7	1.5	2.8
Total - professional	8.3	40.6	28.3
TECHNICAL AND RELATED			
Primary and junior high school teachers	5.0	8.5	7.8
Social workers, artists writers and others	3.0	6.1	2.3
Nursing and paramedical	2.3	4.6	5.2
Technicians	4.1	15.1	7.6
Managers	6.5	0.3	1.9
Total - Technical and related	20.9	34.6	24.8
OTHER OCCUPATIONS			
Clerical	17.6	4.0	9.3
Sales workers	8.4	2.2	3.8
Service workers	12.7	3.9	4.9
Agricultural workers	4.3	0.1	0.1

Unskilled laborers in industry, construction and transport	3.4	2.0	1.4
skilled workers	24.3	12.6	27.1
Total - other occupations	70.8	24.8	46.6
TOTAL	100	100	100

* Immigrants in Nov. 1989 - Oct. 1990, occupation prior to immigration

** Immigrants in 1979 - 1983, occupation prior to immigration

Source: CBS, Labor force survey, 1989 (for Israeli population) CBS, 1983 Census (for immigrants in the '70s)

Ministry of Absorption bulletin (for immigrants in the '90s)

H. CAPITAL IMPORTS

The financial and material assets which the immigrants brought with them are of almost negligible worth due to the low conversion rates of the Soviet Rubble. The material belongings usually include clothing and basic furniture.

IV. ECONOMIC OPENING CONDITIONS FOR ABSORPTION

Following the 1973 Yom Kippur war, the Israeli economy had taken a down turn. A slow down of growth ensued, coupled with balance of payment crisis and severe inflationary processes. In 1985 a stabilization program was adopted which produced favorable results on several levels but also led to a recession. The economic conditions prevailing immediately before the large wave of immigration are the consequences of these developments.

A. EFFICIENCY MEASURES

The stabilization program adopted in 1985 resulted in a dramatic drop in the inflation rate, which fell from 17 percent a month to some 17 percent yearly. A change in economic structural thinking initiated a process which revealed extensive inefficiencies in many sectors in the economy, and led to efficiency measures and recovery programs in various entities. The change was marked by reducing labor input, improving managerial methods, and cutting unprofitable activities. This was somewhat of a shock to the public in that for the first time on a large scale, non private industrial plants were closed due to unprofitability (1985). Government spending was curtailed and as a result the market slowed down considerably.

It was a crucial turning point in the attitudes of both workers and managers relating to accountability, job security and bottom line business

philosophy turning from employment orientation to profitability and viability. This was certainly a distraction from the underlying socialist philosophy followed by all governments and the strong trade union.

In many cases, the operational crisis was accompanied by a financial one which necessitated a revamping of the capital structure by writing off or rescheduling bank loans. In some cases when the chances for recovery warranted, the government would provide loans and loan guarantees.

The time and volume of the recovery and change processes were not uniform across industries and individual plants. They were interrupted by external events -- the Intifada (uprising in the territories) which erupted in December 1987, and the gulf war crisis.

However in 1990, when a turnabout in demand occurred, the business sector was in a more favorable position to respond by substantially increasing output and drastically improving productivity. The business sector's total productivity increased from less than one percent annually in 1981-1984, and 1.2 percent annually in 1986-1989, to 4.4 percent in 1990. Efficiency measures have created an improved base for renewed growth.

B. INVESTMENT AND INFRASTRUCTURE DEVELOPMENT

Achieving sustainable growth requires an atmosphere in which entrepreneurs and manufacturers can expect a stable long term trend of increased demand and profitability. In the absence of such an atmosphere in

the late 1980s, the business sector's investment dropped and growth of productive capital stock declined. Gross investment in the business sector dropped 1.3 percent in 1988 and an additional 10.3 percent in 1989. The ratio of investment to business GDP dropped from 18 percent average for the 1982-1985 period to 14.5 percent in the 1988-1989 time frame. Together with restricted government investment in infrastructure development as part of the 1985 economic package, the economy stagnated.

Better infrastructure, due to externalities, directly and indirectly enhances business activity in the economy, and is a complementary production factor for private business capital.

Thus these developments seriously undermine the economy's growth potential and consequently it's ability to absorb additions to the labor force.

In 1990 there was a turn for the better and investments in most sectors began to rise. Gross investment in business sector's fixed assets grew by some 22 percent and infrastructure investment by 19 percent. Obviously the business sector was responding to increased demand which was mainly financed by the government through it's various support programs for the immigrants.

Table 4.1 demonstrates the trends in infrastructure developments from 1980 to 1990.

TABLE 4.1
INFRASTRUCTURE DEVELOPMENTS, 1980-1990

	1980	1985	1990
TRANSPORT			
Roads (km.)	11,810	12,760	13,181
Motor vehicles, total (thous.)	539	736	1,015
Private cars (thous.)	410	614	892
Railway passengers (thous.)	3,300	2,875	2,475
Ships departing (No.)	2,904	3,176	3,629
International Air Transport Landings	10,933	10,157	12,933
Passenger arrivals and departures (thous.)	2,847	3,144	3,720
COMMUNICATIONS			
Telephone exchanges	143	189	260
Telephones	1,250	1,740	2,285*
International calls (mill. minutes)	64	122	220
Telephone lines per 100 residents	21.5	26.2	33.8
Data transmission lines (No.)	1,150	6,000	10,705
ELECTRICITY			
Installed generating capacity (Megawatts)	2,737	4,062	5,020
Production at peak as % of potential production	73.7	63.9	63.3
Production by type of fuel			
Fuel oil (%)	99.2	43.8	46.6
Coal (%)	0.0	56.1	51.0
FUEL IMPORTS			
Mineral fuel imports (thous. Tons)	8,961	9,975	12,719
Petroleum	7,399	6,292	7,259

Petroleum products	1,561	778	1,421
Coal	1	2,905	4,040
WATER CONSUMPTION			
Total water consumption (mill.cubic meters)	1,679	2,025	1,750
Agricultural	1,212	1,480	1,162
Domestic	368	442	482
Industrial	100	104	106

Source: CBS, Abstract, various years

Some interesting observations should be noted from the data. A substantial increase in the number of vehicles with no parallel increase in road construction. This has led to an increasing congestion of the transportation routes hampering business development. The ratio of cars per Km. of road has increased from 45.6 in 1980 to 77.0 in 1990. The railway passenger volume has decreased, suggesting low quality of service.

Communication data suggests a boom in that field paralleled by infrastructure putting the industry in a good position in that criteria. Electricity production has grown considerably but has not been able to catch up with ever increasing demand.

The water usage grew very modestly probably as a result of media campaigns raising the public awareness of water shortage problems. This suggests an adequate water system for the time.

C. SCIENCE AND TECHNOLOGY

1. RESEARCH AND DEVELOPMENT

R&D in Israel is carried out primarily in seven universities, dozens of government and public research institutes and hundreds of civilian and military oriented enterprises. Significant research is also performed in medical centers and by a number of public service firms in the fields of electrical and power research, telecommunications and water resource management.

Government and public bodies are primarily sources of R&D funding, providing financial support for well over half of Israel's R&D activities.

Relative to the size of the labor force, Israel has a significantly larger number of publishing authors in the natural sciences, engineering, agriculture and medicine than any other country. Figure 4 demonstrates the productivity of Israeli research. Israel's industrial R&D is concentrated in electronics (67 percent). Studies have shown that R&D intensive companies have been the major source of industrial growth and exports over the years.

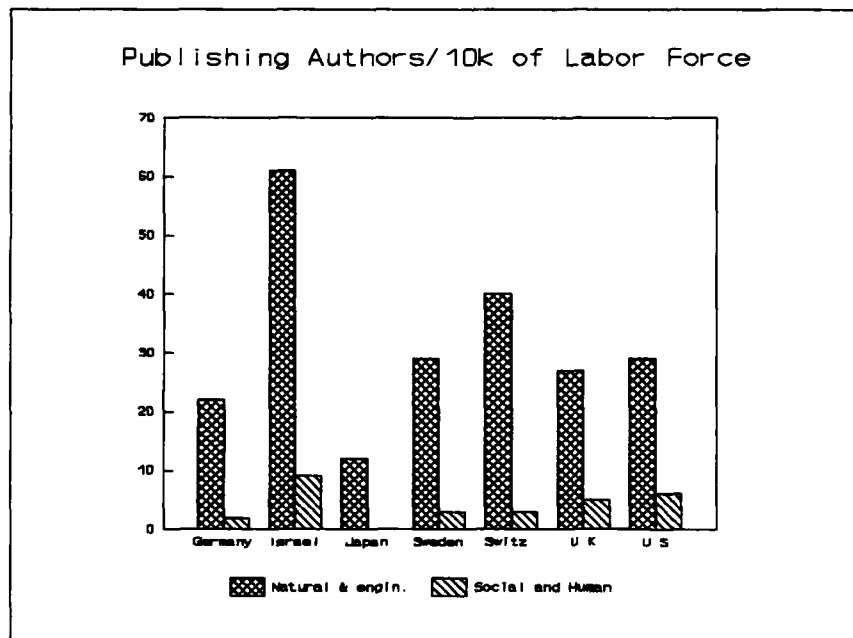


Figure 4

Researchers Publishing Books/Papers in International Scientific Journals: 1987

Source: Institute for Scientific Information, Current Contents address Directory, Philadelphia, 1988

2. ACADEMICALLY TRAINED PERSONNEL

Israel's large reservoir of qualified personnel is primarily responsible for its scientific and technological attainment. The number of graduates in the labor force is very high by international comparison.

Table 4.2 shows the Israeli scientific potential prior to the immigration of the 90s in terms of graduate comparisons with other countries.

TABLE 4.2
 RECIPIENTS OF ACADEMIC DEGREES IN THE NATURAL SCIENCES
 AND ENGINEERING PER 10,000 PARTICIPANTS IN THE LABOR FORCE
 IN THE MID - 1980S

	First Degree		Advanced Degree	
	Natural Sc.	Engineering	Natural Sc.	Engineering
Canada	9.1	6.9	1.6	1.5
Germany	3.6	8.5	0.9	0.4
Israel	9.4	10.6	4.7	2.2
Japan	2.1	12.2	0.4	1.5
Switzerland	2.6	1.7	1.6	0.5
U.K	8.5	6.4	2.0	1.8
U.S	9.9	6.6	2.4	2.1

*Includes mathematics and computer science

Source: UNESCO, Statistical Yearbook 1987, and for Israel: Central Bureau of Statistics, Recipients of Degrees from Universities 1988/89

D. STRUCTURAL REFORM

As mentioned before, the gradual change in the prevailing economic philosophy called for a reduction in the government's strong involvement and regulation of the economic activity. Due to size limitations and erected barriers, monopolies and cartels developed, marked by low efficiency and substantial excess capacity. Heavy governmental involvement set quotas, controlled prices, and occasionally allocated imported raw material to various users.

Opening certain sectors of the economy to competition was the step taken from 1987. The energy sector was deregulated, petroleum imports were freed

from restrictions and the prices were allowed to fluctuate according to world market. The edible (food) oil industry was removed from the government hands to private enterprises, the cartel was canceled and price control ended. The same policy applied to fodder grain. In 1990 the policy was expanded to the wheat and flour milling industry and agricultural products such as poultry, egg and citrus. The policy implementations were made difficult due to entrenched political lobby groups, but the substantial weakening of the trade unions and the favorable public endorsement of the changes speeded up the processes.

Free trade agreement with Israel's major trading partners have led to a liberalization of import restrictions. Price control was removed by elimination of subsidies on basic food products, minimum bid tenders for sale of government owned lands was abolished, and as mentioned prices of petroleum products, telecommunication services and electricity fluctuate with markets prices.

Concurrently tax rates were lowered, unified and simplified. Foreign currency control and support of the Israeli Shekel were limited and allowed to fluctuate.

On the other side of the coin although progress has been made of late, it is still viewed as insufficient. According to Alvin Rabushka, a specialist on Israeli economy at the Stanford university's Hoover Institution;

We're not talking about a productive private sector getting more access to capital. We're talking about a public sector that is already bloated, inefficient, and wasteful getting

more resources, leading to more bloat and inefficiency.[Ref. 10]

E. PRIVATIZATION

The potential for privatization has been estimated in 1988 by First Boston Corp. at \$5 billion worth of companies ripe for sell-off. The realized potential in 1990 (\$770 million) shows both the depth of assets and the slow sell off rate suggesting reluctance of governmental agencies to let go due to parochial interests.

The housing mortgage financing has moved to commercial banks at their own risks. Private labor exchange agencies were permitted to operate in the labor market and the Trade Administration, which had been charged with procuring and importing various raw materials and products, has phased out most of its activities.

F. REFORMS IN THE FINANCIAL MARKETS

The most important element of the reform was the reduction of budget deficit from some 15 percent in the early 80s to 3-4 percent in the second half of the decade.

The government canceled arrangements enabling financial savings institutions to deposit funds with the government (essentially a guarantee), and purchase bonds on preferential terms. As a result the government raises

70 percent of its borrowing via negotiable bonds compared with only 5 percent several years ago.

Liberalization of capital flow restrictions, overseas investment and fund raising policies, and foreign currency holding restrictions led to the exposure of local banks to outside competition. This caused real short term interest rates to drop to international level from 6 percent in 1986 to 2-3 percent in 1990-1991.

All of the above mentioned structural reforms have generated basic and far reaching changes which could be instrumental in creating an appropriate base for resumption of accelerated economic growth.

G. BALANCE OF PAYMENTS

Table 4.3 shows the external debt situation. The debt crisis appears severe in 1984, 1987. However data for 1990 shows an external debt situation which is the lowest it has been for more than two decades.

TABLE 4.3
EXTERNAL DEBT DATA - SELECTED YEARS
(\$ MILLIONS AND PERCENTAGES)

	1977	1981	1984	1987	1989	1990
External debt, net (end of year)	8,822	13,373	18,903	18,214	16,244	15,560
Foreign reserves held by central monetary institutions	1,770	3,814	3,318	6,027	6,208	7,000
Interest payments on external debt, net	421	762	1,565	1,469	1,265	1,088
Debt service, net	1,135	2,005	2,765	3,209	2,956	2,916
Net interest payments as % of: exports	8	9	17	11	8	6
Net debt service as % of: *Exports	22	23	30	24	19	17
*Exports + net unilateral transfers	17	17	22	18	14	13
Net external debt as % of: *Exports	166	145	196	129	96	89
*GDP	59	58	73	53	38	31
Months of imports covered by foreign reserves		3.1	2.6	3.7	3.6	3.6

Source: Bank of Israel, Annual Report, various years

As the immigration absorption process produces a gap in resources, (to be discussed in a later chapter) the country's ability to raise capital abroad becomes all the more important in terms of debt repayment capacity, and therefore in its ability to incur new foreign debts. Nevertheless, because of the magnitudes of the capital requirements, the improvements are likely to be insufficient without additional support for Israel's international financial status.

H. INCREASES IN LABOR SUPPLY AND RISING UNEMPLOYMENT

During the 1970s and early 1980s, population growth accounted for the major part (95 percent) of the increment to the labor force. In 1987-1989, labor supply increased at rates higher than those stemming from population growth: on the average, only 68 percent of the increase is explained by population growth. The remainder is attributable to shifts in the age structure, education level and specific labor force participation rates. This was most apparent for women whose participation rate rose from 30 percent to over 40 percent within the last two decades.

Unemployment rates in Israel--from 3 to 5 percent--have been low in most years. The above mentioned relatively rapid expansion of the labor force, coupled with economic recession and structural changes discussed in this chapter, caused a sharp increase in unemployment from some 6 percent in

1987 to 9 percent in 1989. In this respect the immigration wave has arrived at an "inconvenient" time with respect to the economy's need for labor supply.

I. DISTRIBUTION OF EMPLOYMENT BY INDUSTRIES AND OCCUPATIONS

The public sector's share of employment is exceptionally high, by international comparison - some 29 percent, and is a burden on the economy. In the industrial sector there has been a substantial shift toward a more sophisticated human, and tangible-capital intensive technologies compared with the labor intensive technologies so common in the past.

The occupational composition of the immigrants partially corresponds to this trend but the sheer number of immigrants will probably necessitate occupation substitution (a point elaborated in Chapter V).

The major sectors by economic branch are similar to European countries. The respective shares are presented in Table 4.3.

TABLE 4.3
MAJOR SECTORS BY ECONOMIC BRANCH
(IN PERCENT)

Branch	GNP	Labor Force	Exports*	Investments
Industry	31	31	58	22
Agriculture	8	7	5	4
Construction	10	11	-	32
Transportation & Communications	16	8	11	20

Commerce & Services	35	43	26	22
---------------------	----	----	----	----

*Includes goods and services

Source: Bank of Israel, Annual Report, 1989

J. FLEXIBILITY OF THE WAGE SYSTEM

As part of the stabilization policy , the government tried with some success to reduce the automatic linkage between wage movements and price changes (known as COLA in the U.S). This trend has been supported by slack in the labor market, and substantial downward pressure resulted from it. Consequently the wage system became more flexible. In 1989 COLA compensated for only 43 percent of price increases, in contrast with 62 percent in the early 70s, and 74 percent in the early 80s.

Wage differentials used to be uniform in most denominations with interdisciplinary connections causing low association between productivity and wage compensation. in 1989 wages were determined either industry wide or the plant level. In the 1976-1979 period an average of 67 percent of wage increases stemmed from COLA, 13 percent from country wide wage agreements and only 20 percent were awarded on the industry or plant level. In 1987-1989 the corresponding numbers are 46, 46, and 8 percent respectively.

Inter-industry variance of wage has also increased, with manufacturing industry leading with 4.5 percent. This reflects tighter link between wages and industry profitability. A setback in that respect is the rise of real wages by 10 percent in the public services while the business sector rose by only 3 percent

(1990 data). In any case a flexible wage system is conducive to absorbing excess labor supplies.

It is important to note however that wage rigidity in the Israeli economy is still high by international comparison[Ref. 11]. (Data source for this subsection: Efraim Kleiman, 'Indexation in the labor market', in Ref. 11).

V. THEORY OF ECONOMICS OF IMMIGRATION AND ITS APPLICABILITY

Literature on the subject of immigration points to many similar general attributes of immigrants in case studies in the western world. Traditionally the countries having extensive experience in immigration absorption are; the United States, Canada, Great Britain, Australia and Israel. The similarities stem from the reasons behind the migrations, namely economic incentives to migration coupled with political reasons. However in assessing the current wave of immigration we should note two differences which make the Israeli case unique. This uniqueness must be accounted for before we try to draw specific conclusions from the general theories.

1) The sheer numbers of immigrants as percentage of the resident population, some 3.5 percent in 1990 and 3 percent in 1991 compared with the highest percentage in U.S history 1.6 percent in 1850s and the beginning of the 20th century[Ref. 12] is one striking difference.

2) The education level of the immigrants and their occupational distribution is unusual in its high percentage of skilled professionals whose occupational mobility and its social effects are different from the ones found in studies.

In our assessment of the current wave of immigration we have data on a previous wave of immigration to Israel in the 1970s of Soviet Jewry whose characteristics were similar to those of the present wave.

A. LABOR FORCE PARTICIPATION

The similarities in pattern of labor force participation among the different countries is striking. The data tells us that the participation rate for women and older men are higher than those of natives. In Israel, where as in the early 70s some 53 percent of the civilian Israeli population age 15+ was in the labor force, about 65 percent of the Soviet Jews in that age group were in the labor force two years after their arrival (Simon, p.57-58). That difference of 20 percent while considered large, is probably accounted for by the compulsory conscription of all 18 years old in Israel for 3 year (women for 2 years), which delays their entry to the work force.

Table 5.1 shows that the participation rate for the 90s immigrants is already high, and the data is somewhat premature, as it was taken less than 2 years after their immigration. However one can see the trends of high participation rates will tend to follow those of past immigrants from the USSR. Therefore the effect on the labor market will be of an addition of a greater number of entrants than the traditional veteran rate.

TABLE 5.1
ISRAELI POPULATION AND IMMIGRANTS FROM THE FORMER USSR,
AGED 15+, PARTICIPATION IN THE LABOR FORCE (PERCENTAGES)

	Israeli population 1989	Immigrants from the USSR	
		In the '90s*	In the '70s**
Total	52.0	56.3	65.6
Male	63.0	67.4	78.6
Female	41.3	47.0	No data
15-17	12.1	13.5	No data
18-24	41.3	55.6	No data
25-34	71.0	74.5	No data
35-44	75.7	75.1	No data
45-54	70.8	76.5	No data
55-64	49.2	44.5	No data
65+	13.2	7.6	No data

Persons employed in the labor force

Total	91.1	70.7	92.7
-------	------	------	------

* Immigrated Jan-June, 1990, in Jan-april, 1991

**Immigrated 1973-1974, 5 years after arrival

Source: CBS, Abstract, 1990,1991

CBS: "Immigrants from the USSR - the first five years in Israel" special series
 No. 682, 1982

B. UNEMPLOYMENT

The unemployment levels among immigrants generally follows the veteran population unemployment rate. Their lack of comparative skills owing to language and culture differential, is compensated by greater wage flexibility

and occupational mobility. The immigrants are willing to move geographically and thus are more adaptive to market fluctuations. In 1972-3, 66 percent of the Soviet immigrants who were in the labor pool found jobs within two months. Within one year of arrival, 90 percent of those in the labor force who came in 1971-1972 were employed (95 percent for males). This reflects the low unemployment rate at the time (some 3 percent), and the immigrant's eagerness to find work.

The current unemployment rate in Israel hovers around 10-11 percent (April 1993) and reflects both the state of the economy and the influx of entrants into the labor force. The unemployment among the immigrants is substantially higher. If we recall the high percentage of government employees in Israel (some 30 percent) the unemployment prospect becomes worse, because keeping the unemployment level at a manageable rate (preventing social unrest and poverty pockets) by initiating public works means public burden.

C. JOB DISPLACEMENT

If the numbers of jobs are fixed, and the immigrants occupy some jobs, there are fewer available jobs for natives. "Displacement" of natives by immigrants is the most emotional and politically influential fear about immigration. As the Committee for The Economic Development of Australia put it, "no issue fires the debate about immigration more than its alleged effect on unemployment in Australia" [Ref. 13].

The following Interview with Jacque Chirac, Prime Minister of France illustrates the point further;

Chirac:...for several years now, and particularly since 1981, large numbers of immigrants have been arriving in France. Given the economic situation, there are too many of them. Their numbers will thus have to decline.

Liberation [A Paris daily newspaper]: Can you assert that there is a link between the number of immigrants and the economic situation?

Chirac: Naturally. if there were fewer immigrants, there would be less unemployment, fewer tensions in certain towns and neighborhoods, a lower social cost.

Liberation: That has never been formally proven.

Chirac: It is easy to imagine, nevertheless. This means that we must not accept any new immigration and we must severely curb illegal immigrants, rigorously apply laws of the Republic, systematically expel those whose status is irregular ... [Ref. 14].

In Germany: About 50 percent of the West Germans surveyed worried that the East Germans are crowding the job market.[Ref. 15]

In the U.S during 1982 Congressional discussion;

Ray Denison, chief lobbyist for the AFL/CIO, disclosed that the labor federation will oppose the bill unless it's assured that the Reagan administration and a majority of the house endorse proposed restrictions on the U.S hiring of foreigners as temporary workers... the AFL-CIO long has been the prime backer of the bill's main element, which would make the hiring of illegal aliens by U.S employers a federal offence.[Ref. 16]

The quotations show the anxiety level which is generated by immigrants competing with natives for jobs. Two forces in the labor market are at work. On the one hand, a crowding effect will cause longer queuing for jobs and lower rates of successful applications. This short run phenomenon has a congestion

effect which promotes unemployment and lowers wages. The long run effect is higher productivity and with the effect of economies of scale should induce growth of the job market.

In Israel, the immigrants are crowding out Israeli workers at the lower end of the social and wage levels. Although the decrease of Arab worker participation in the menial job market has reduced the severity of the situation, there are signs of hostility (see discussion in chapter VI)

D. OCCUPATIONAL SUBSTITUTION[Ref. 17]

The occupational mobility of the immigrants is an important aspect of their ability to integrate into the labor market and social structure of the receiving country. It affects flexibility in the labor market, productivity through accommodation to market trends, and wage flexibility.

Although it is somewhat premature to assess the current occupational substitution trends, there have been studies of patterns of immigrants from the USSR in 1979-1981. These studies can predict the expected trends among the current immigrants in so far as their demographic and occupational traits are similar.

Relative to the Israeli labor force, the current wave of immigration from the Soviet Union has a very high proportion of graduates in the technological and medical professions who, if integrated into the economy, would make the country's labor force the most highly skilled in the world. As an example, the

proportion of graduates in the United States in 1989 was some 5 percent compared to the corresponding Israeli figure of 9 percent. The latter figure has risen to some 11 percent in 1993.

A considerable number of the immigrants of the 70s changed their occupation even though there were no particular pressures in the labor market at the time. The rate at which today's immigrants change their occupation is expected to increase due to the following reasons:

1) The large scale immigration which accounts for an average labor annual growth of 4.5 percent out of an overall growth rate of 6.5 percent (at least in the 1990-1992 labor market). During the '70s and '80s by contrast, Soviet immigration contributed only 0.5 percent.

2) Job seekers among the current wave of immigration are confronted by a labor market where the unemployment rate is some 10-11 percent, compared with an annual average of 3.3 percent in the '70s.

3) The high number of graduates must be taken into account when assessing their potential occupational distribution in the Israeli economy. Particularly noticeable is the fact that over 60 percent of these graduates are engineers and architects.

Among those arriving in previous waves of immigration, some 40 percent who entered the Israeli labor market changed their occupation (this compared to 15 percent of Israelis who have changed their occupation in the 5 years prior to 1989). The rate of substitution among graduates (not including doctors in

the medical profession) was around 42 percent. The rate of substitution in the medical profession was 3 percent for doctors and 15 percent for paramedics. Other occupational fields experienced 54 percent substitution (accounting, journalism, management).

Table 5.2 shows occupational substitution trends. The medical field is presently saturated and therefore will probably force high substitution rates.

TABLE 5.2 - OCCUPATIONAL STRUCTURE OF THE 1979-1981 IMMIGRANT POPULATION IN THE SOVIET UNION AND ISRAEL, AND RATES OF OCCUPATIONAL RETENTION

		occupational structure of immigrants		Retained their occupation		+
		In Soviet Union	In Israel			
	Total-absolute figures(persons)	6,220	6,220			
	Percent	100.0	100.0	63.6		++
1	Graduates in the natural sciences	1.2	0.7	60.1		1-6
2	Engineers	16.1	11.2	65.0		1-6
3-4	Doctors & pharmacists	5.7	5.7	95.5		3-4
5	Social science/humanities graduates	2.7	1.0	29.4		1-6
6	Teachers in higher education	3.4	3.1	76.1		1-6
7	Teachers	7.8	5.1	56.7		6-7
8	Accountants/journalists	2.2	0.6	25.9		6-8
9	nurses & paramedical staff	5.7	5.4	84.5		
10	Technicians	8.0	8.0	61.5		1-10
11	Managers	2.2	1.0	11.1	(33.3)	11 (2-10)

12	Clerical workers	8.8	10.9	56.8		11-12
13	Sales workers	2.7	1.7	17.6	(5.9) clerks	13
14	Service workers	4.4	6.8	63.6		12-14
15	Agricultural workers	0.1	0.9	0.0		15
16	Manual workers	1.2	5.7	26.7		16
17	Skilled workers	27.9	32.4	71.8		17
				*(A)	*(B)	
1-6	Graduates	<u>29.1</u>	<u>21.7</u>	<u>68.7</u>	<u>68.7</u>	
	Not including doctors	23.4	16.0	62.2	62.2	
7-12	Intermediate white collar professionals	<u>34.7</u>	31.0	<u>57.6</u>	64.8	
	Not including nurses	29.0	25.6	52.3	61.2	
13-17	Blue collar workers	<u>36.3</u>	<u>47.5</u>	<u>65.1</u>	<u>89.2</u>	

+ Definition of "retention" within the occupational group

++ According to the collective definition described below

*A Occupational retention rate as defined above for each occupation.

*B Occupational retention rate in the expanded occupational groups: "Graduates", "Intermediate professions" & "Blue collar workers"

Source: CBS, 1983 population and housing census figures

The trend showed downward mobility where engineers became technicians, technicians became skilled manual workers, and skilled workers generally moved over to the service sector. A similar pattern was observed among the approximately 250,000 Soviet Jews who immigrated to the United

States in the '70s and '80s. Part of the downward trend is due to the redefinition of immigrant's occupation which more accurately conforms to local (western world) occupational classification.

Occupation retention rate is determined by the suitability to the Israeli economy and the amount of additional investment necessary (training). Thus those in the medical profession, teaching profession (especially in non-university higher education), and skilled workers, retained their jobs in accordance with the labor market demands.

A common factor among those retaining their occupation was a higher educational background and higher income. This suggests that the market was able to choose the better qualified of the professionals (There is a positive correlation between education level and income, and occupational retention)

It should be noted that there are differences in the occupational distribution between the analyzed population and the current immigrants. The latter portray higher rates of graduates. For example some 25 percent engineers compared with 14 percent in the previous immigration wave.

Structural changes within the Israeli economy will be affected by the availability of a highly educated, technically oriented work force. It is also a rare opportunity to initiate structural changes to accommodate the human capital embodied in the immigrants. The trend toward non tradable and service goods is supportive of the occupational distribution.

Short term bottle necks are expected due to the need for an increased stock of capital and a suitable scale of investment, and the time lapsing until investments yield results. Meanwhile until an expansion of capital stock takes place it can be assumed that the immigrants will undergo vocational training in order to work in the service sector (mostly public sector) where the capital/labor ratio is lower.

The obvious solution to the latter problem would be to direct the efforts toward expansion of the infrastructure in order to support long term business interests.

In the long term, the most important condition for achieving structural changes in the economy and the development of human capital intensive enterprises is a radical increase in the economy's exposure to international markets (to be discussed in Chapters VII, VIII).

E. FERTILITY

As seen in the characteristics of Soviet immigrants their fertility rates are much lower than that of the Israeli population. The average family size of 3.00 (not including singles) compared to the veterans' 4.11 (Table 3.1 in Chapter III). This means relatively low taxation on the educational system in the short and long run. It also predicts a slow down in future growth of the entries into the labor force due to natural population growth.

F. MORTALITY

The mortality of immigrants reflects ethnic trends. There does not seem to be any difference between mortality rates of immigrants and veteran Israeli population.

G. EARNINGS COMPARISONS

Studies in the United States found that, holding other relevant variables constant, earnings "cross over" - that is, catching up and passing natives' earnings after 10-15 years in the U.S. (Chiswick, 1978, 1982). Blau (1980) found that upon arrival, immigrants earned less than did native workers by somewhere between 12 and 18 percent for men, and between 10 and 14 percent for women.

Interestingly native whites with foreign parents earned more than native whites with native parents, suggesting that there is a continuing positive effect of immigration by way of psychological-cultural factors. One has to remember though, that selective immigration policies can skew that effect by setting the entry barrier so that only immigrants with a high level of human capital are allowed in.

The case in Israel is that no selection is done at all. Israeli law does not permit the discrimination of any Jew wishing to enter. Therefore the wage earning attributes of immigrants tend to reflect their original level of human capital.

H. MOBILITY

Kuznets once remarked (Simon p.92) that it would be difficult to over-estimate the economic importance of domestic mobility and its enhancement of economic flexibility. It is logical that new immigrants should be particularly mobile, because (unlike natives) they do not already have a stock of knowledge of persons and institutions which make it cheaper to remain in a given place than to begin anew elsewhere.

I. PROPENSITY TO START NEW BUSINESS

While studies do not as yet show particularly discernable trend, data and anecdotal cases suggests that immigrants do have a propensity to start new business to a somewhat greater degree than natives (because jobs in government and education are usually not open to them). The Soviet immigrants might be expected to lack this kind of initiative owing to the nature of their economic culture background, which discouraged private entrepreneurialism. Their expectation of job placement by the authorities would stand in the way of their propensity to start new business. However, although it is some what too early to find hard data, there are some signs of entrepreneurship. In an article in the New York Times[Ref. 18] Yuri Shtern who is in charge of immigrant issues for the Federation of Israeli Chambers of Commerce, says "Russians have begun between 2,000 and 4,000

new businesses in the last two years, each employing an average of three workers, usually fellow Russians".

J. CHILDREN OF IMMIGRANTS

Studies show that children of immigrants tend to have a higher labor participation rate than natives, and a higher propensity to start new business. Richmond and Zubrzycki[Ref. 19] show that the children of immigrants earn much more than the children of natives. This suggests that the children hold the same positive attributes exemplified by their parents.

The Richmond and Zubrzycki data (Ref. 19, tables v-5 and v-7) show that Canadians with at least one parent foreign born, had substantially higher income. For example; Jewish Canadians have not only the highest income but also the highest differential between Canadian born parents and one or two foreign born parents (25% difference). One explanation could be that as the children of immigrants attain the language and social skills lacked by their parents, they are in a good position to use their "inherited" motivational background.

K. CRIME

While crime rate studies are very difficult to control for variances, data on Soviet immigrants suggests that their crime rate is not low. Their alcohol drinking habits coupled with high unemployment rates produced petty crime.

Prostitution is not uncommon [Ref. 20] and may represent entrepreneurial initiatives in an environment of high unemployment.

L. EFFECTS OF IMMIGRANTS ON PUBLIC COFFERS

Cost benefit analysis of the impact of immigrants on the public coffers has to do with the imposition of burden upon the native population. Their use of social services such as medical care, unemployment pay, food programs, aid to dependent children, retirement payment and schooling expenditures. Generally, immigrants use less than their share in such services. this is largely due to the age composition of immigrant families, who typically are adults arriving in the early prime of their working lives with relatively few children.

The case of the Soviet immigrants is somewhat peculiar. The age distribution shows that in general the average age of the immigrants is not as young as in other countries, and the proportion of older people is significantly higher than other countries and in fact higher than the native population.

In Chap' III, Table 3.2 we saw that the percentage of immigrants aged 64-75 was 9.0 and over 75 was 4.9 compared with 5.2 and 3.8 respectively for the veterans. This, coupled with the social services supplied - housing subsidies, special rights of importation of goods, and acclimatization services - are quite large.

Medical care - The large percentage of older population within the immigrant group suggests a substantial burden on the already taxed Israeli

health system. The taxation of the health system is mainly in geriatric care and other health costs associated with increased use of the system correlated to age. The generous health policy makes the system particularly congested. Many of the immigrants are entitled to and receive pensions from the CIS (Commonwealth of Independent States) but its monetary value is negligible. Retirement benefits in the form of social welfare is also substantial due to the inclusion of the immigrants in the Israeli social security programs.

The next substantial compensation is the unemployment benefit. The high unemployment has a direct effect on the burden.

These three programs are unique in that they directly fully tax the veteran population which has to bear the financial consequences. It should be noted that some of these costs are offset by charity contributions directly connected to the immigration to the amount of about \$1 billion, from sources abroad (mainly world Jewry).

Taxes paid by immigrants, will in the future offset some of the burden. The higher labor participation rate promises to shift a higher relative contribution of the immigrants to tax revenue than the veterans. This without considering other indirect effects such as productivity, wage flexibility and other positive economic effects to be discussed in a later chapter.

The high tax rates in Israel will make the immigrants' contribution more substantial at an earlier stage than in a low tax situation. An additional

burden sharing characteristic is the participation of the immigrants in the military allowing (*ceteris paribus*) veterans to serve less reserve duty time.

When thinking about the totality of the economic effects of immigrants upon natives, one must take into account - in addition to the points discussed here - both capital dilution (negative effect on natives) and productivity (positive effect on natives). Data from the U.S., Great Britain, Canada, and Israel (not including the current immigration wave) confirm that immigrants use little services and pay substantial taxes relative to natives (Simon p. 128).

Because of their size, transfer payments have great influence on the economy and public budget. Family structure - especially the presence of female - headed families with two or more children, and old age retirement recipients, are the most important determinant of the rate of use of transfer payments (aside from social security, Medicare and other payments).

M. EFFECT OF IMMIGRANTS THROUGH DILUTION OF PRODUCTION CAPITAL

Immigrants obtain benefits from capital they do not pay for, and thereby either reduce the amount of available capital per native, or force natives to pay for capital to equip the immigrants. The effect can be separated into a public segment and a business segment. Within the public sector many services which are not congested should not cause a burden on natives.

In the Israeli case the school system (due to age distribution) the military and many social service systems would be able to service the immigrants without placing too much demands on capital. Other systems such as: public housing, social security, unemployment fund and Medicare, are heavily taxed and will certainly require additional capital in order to supply the same level of service, or even to survive severe deterioration which could result in social and political unrest.

The business sector should benefit greatly from the immigrants. In a theory explained by Yeager (1958), Borts and Stein (1964), and Berry and Soligo (1969)[Ref. 21] they emphasize a lesson about the aggregate effect; if immigrants do not own the physical capital with which they work, natives as a whole benefit because of the additional returns earned by the capital. (though "workers" qua workers lose because their wages go down). If there is no congestion in the business sector (as there rarely is) then productivity should increase. In the Israeli case the increased flexibility of the wage system coupled with the increase of the average "quality" of human capital present in the job market, should enhance the business sectors' productivity in the long run. In the short run vocational training and language and cultural difficulties may slow the positive effects mentioned.

N. HUMAN CAPITAL EXTERNALITIES

A person's output depends not only on the person's own skills and the quality of the machines one works with, but also on the quality of the skills of the persons one works with.

Immigrants from poor countries possess poorer productive skills than do people with the same amount of formal education in richer countries; this is almost definitionally true, and the effect can be seen in the lower incomes of those immigrants in the countries from which they have come than in the incomes they expect in the receiving country (which is essentially the reason they have come). Until they improve their informally learned skills - handling modern communications systems, or getting used to doing things by telephone and computer rather than in person and with pencil and paper - they present lower quality human capital for their native counterparts to cooperate with. This will reduce the productivity of local workers until the immigrants - perhaps in two or five years - pick up the informal training (after which they forge ahead of the natives) (Simon, p.183).

In Israel's case the theory should also hold true. Physicians have to be retrained in modern methods, engineers oriented with computer programming and technicians have to learn modern methods. All have to be indoctrinated into the philosophy of free market and competitive venturing. Different reward systems, motivational systems and the decreased role of government

will prolong the assimilation, and surely cause stress and exasperation on the part of the immigrants and the veteran population.

However when trying to assess the externality effect we have to realize the human capital worth of the immigrant population in comparison with the receiving population. Although difficult to quantify, we can use the criteria of education level comparison and occupational distribution. Reflecting on the data presented in Chapter III, we can see an exceptionally high level of education and an abnormally high percentage of high valued occupational skills (physicians, engineers, technician etc.). This would suggest a positive external effect on the native population resulting in higher productivity. Another aspect of this phenomenon is the new investment opportunity created by immigrant scientists and engineers. This should in itself, cause capital flow into the country from abroad to invest in these opportunities, which works to keep the supply of capital per worker from being diluted. (This point will be elaborated in Chapter VIII).

O. IMPACT UPON NATURAL RESOURCES AND THE ENVIRONMENT

Natural resources in the form of land, agriculture, and water are taxed by the addition of immigrants. Obviously in the short run it will require extensive investment in infrastructure. The systems which are not used to their fullest potential will actually benefit through higher utility use rate. As

we have seen in Chapter IV, the road network and power supply systems are reaching their maximum use potential and will require budgetary sacrifice. The water system in the Middle East - is a crucial constraint to development. In September 1989, a report by the University of Pennsylvania said Israel was already using 95% of its annual renewable water resources[Ref. 22] and like Jordan, would outstrip its resources within a decade. However, as Table 4.1 shows, the consumption rate has actually dropped within the last decade, and coupled with extraordinarily wet years in 1991 and 1992 water reservoirs have been totally replenished rendering the report somewhat pessimistic.

Thus the educational, communication, and water systems, seem to be in a fairly adequate shape not requiring extra ordinary supplementary funding due to immigration. (The education system does require expansion due to age structure changes in the veteran population).

Pollution rates in Israel are relatively low (except in the northern industrial center), and do not constitute a severe problem in any case since Israeli heavy industry is quite limited.

P. CONCLUSION

The effects of immigration are far reaching in many disciplines; the labor market, housing , and social services being the ones challenged in the short

run, and the economic, social and cultural structures being affected in the long run.

Studies in the western world have shown that immigration is a contributing factor economically, provided some kind of a discriminating control mechanism is instituted. These mechanisms are usually age, educational, financial or cultural based. These policies bring immigrants who are eager to work hard at a low cost and at very low social costs in terms of state supplied benefits. In turn the immigrants arriving at the prime of their productive life, subsidize their native counterparts by contributing through taxes more than they take. Thus the base ideology of the absorbing countries is to use the immigrants as a leverage for economic advantage. The assumption is that the immigrants are better off than in their original country and they had taken a risk and are willing to pay a high price (in terms of working conditions, salary etc.).

The situation in Israel is fundamentally different. It is trying to attract Jews to emigrate and make Israel their homeland. The higher the qualifications of the immigrants the more chances there are that other countries would be interested in them. At the same time the economic opportunities in Israel are limited to only a moderate flow of immigrants who can supplement the Israeli labor force.

The characteristics of the immigrants are uncommon in their age distribution, having a high percentage of elderly. The Israeli system of social

benefits to which they are entitled and the subsidies provided by the state coupled with the economic limits of a small scale market and a non flexible (downward) compensation system, taxes the Israeli economy very heavily in the short to medium run. In the long run, all the arguments supporting the assumption of positive outcomes of immigration, are present in the Soviet Jewish immigration. These are productivity increases, through higher human capital intensive labor force, matching of the labor force attributes to high tech shifts in world commerce, and economies of scale which are very important in a small semi-secluded country.

VI IMMIGRATION ABSORPTION 1989-1992 THE POLITICAL, ECONOMIC AND CULTURAL ATTRIBUTES

The massive immigration which started in the end of 1989 caught Israel by a "surprise". The surprise had several elements, political, economic, cultural and others which led to a mediocre performance concerning the capitalization on the human "prize" given the state of Israel.

The immigration wave engulfed Israel at a time when its internal and external environments were transforming.

An Arab uprising (Intifada) in the territories was straining the public consensus on the political and humanitarian question of the relationship between the territories and Israel. It was becoming clear that the Israelis will have to make concessions to the Palestinians in order to subdue the tension. Israelis were becoming frustrated with the level of terrorism and resolve displayed by the Palestinians.

The end of the Cold War and Desert Storm - with the psychological strain of being passively subjected to Scud missile attacks in 1991 - presented the Israelis with a new external environment. It removed the threat of possible imminent attack by its enemies. This allowed a deliberation on the prospect of an end to belligerency and perpetrated confusion within the public pertaining to the chances and dangers of political settlements in the area.

A consensus on economic strategy was slowly building while implementation was hampered by strong interest groups. The strategy of opening the market to competition was adopted by the trade unions but as the government did not display clear leadership, the power groups were slowing reforms (although none of them had ideological motives).

The public was showing frustration with the political system. It perceived a lack of leadership, consistency, and accountability in the public sector. It was coupled with media expositions of interest groups and inadequacies in the public sector. Thus it has become very difficult to rally the public toward any cause, including immigration absorption. The public did however rally around a popular call for a change in the electoral system which was perceived to be a cause of many of the inadequacies in the Israeli society. (In spite of the Labor party's support for the change, too many powerful interest groups opposed it and progressive legislation of the electoral system is still gridlocked.)

A. THE POLITICAL ASPECT

The Israeli political machinery suffered from gridlock and stagnation for several years before the wave of immigration started in 1989. The government was comprised of the two biggest political parties, the Labor and Likud, who were forced into coalition by the indecisiveness of the elections. Coupled with the natural rivalries of left and right, were the powers of smaller political

forces representing different interest groups, playing the bigger parties against each other. In 1989 the Likud party (the leading partner in the coalition) was internally weakened by factionalization and personal rivalries. Several top ministers challenged the prime minister's authority and were busy creating political power bases and public support for their own agendas.

(The Israeli political system is essentially winner never takes all, and interest groups have a much larger share than their respective representation. There has never been a government which was not a coalition of some sort for lack of decisiveness in the 13 elections held since 1948.)

The gridlock resulted in fundamental flaws in governing.

1) Decision making - The government was paralyzed in that sense and had made decisions in a reactive manner and only after public pressure when it was no longer possible to delay. Committees had to be bipartisan, bringing rivalries and power clashes to every facet of decision making.

2) Implementation - once decisions had been made, they met with bureaucratic inept systems. Those were very slow in reacting to changes and correcting mistakes (Since many functions are still performed by public entities).

Probably the worst demonstrated case was the "division of labor" between the ministry of housing (headed by then minister Ariel Sharon) and the various agencies dealing with policies for job creation and economic planning.

Mr. Sharon had a political agenda in which he pushed for demographic dispersion of the immigrants to underdeveloped towns and the West Bank, essentially to strengthen those areas. His motives were genuine but political in nature. Since private contractors were skeptical about the ability (and will) of the immigrants to finance housing in those areas, Mr. Sharon agreed to guarantee their investments and provide for infrastructure developments. As a result thousands of housing units were built adjacent to small economically fledgling towns. That included importing several thousand 20-30 square meter trailer homes with limited life span.

It was obvious that the immigrants could not find jobs in those areas since they had no industrial infrastructure and were already suffering higher unemployment than the rest of Israel. Even though it was clear to the government that the discrepancy between housing and job opportunity would waste billions of dollars, and the Finance Minister (Yizhak Modai) complained publicly that Sharon was using money and guaranteeing unappropriated money, the prime minister was helpless. The political factionalization within the Likud party had weakened the prime minister to an extent where he could not interfere in the affair. In 1991 after realizing that Israel cannot face the financial burden without internal political and social turmoil, the prime minister (Yizhak Shamir) opted to ask the United States for \$400 million in housing aid. By that time Ariel Sharon was busily preparing infrastructure in the West bank. When U.S. President Bush (through Secretary Baker)

preconditioned the aid on cessation of the infrastructure development, Mr. Shamir was trapped. Were he to agree to the condition, he would play into Mr. Sharon's hands proving that he was bending to pressure on an ideological issue dear to the Likud party's heart. This would have undermined the prime minister's position to a point where he might not have survived an internal Likud political coup. Thus ensued another stalemate in which the immigrants played a hostage role in a political power game.

The same logic was carried through when it was apparent that extensive borrowing was needed (from the international community) in order to finance the absorption process. The Ministry of Finance had calculated a need for at least \$10 billion loans and the U.S was asked for guarantees to that loan. Internal political problems prevented the government from pursuing policies commensurate with the interests of immigrants. Eventually this (as well as other unrelated reasons) had caused the failure of the Likud in the 1992 summer elections.

Despite months of repeated emergency appeals by Jewish agency leaders and other non-government immigration specialists, cabinets under Shamir have failed to take decisive steps to prepare housing, education or other services for the new population[Ref. 23].

In the summer of 1992 the labor party won the elections and presented a more coherent policy in many disciplines including economic strategy and immigration absorption.

The Labor government is exhibiting surprising alignment along its policy lines and is building political consensus and credibility in its political and economic strategies (as of summer 1993).

B. THE ECONOMIC ASPECT

As analyzed in Chapter IV, 1989 was a year of recession and rising unemployment. In 1990 as the immigration wave swelled, the government appealed to world Jewry to aid in the absorption of the immigrants. The fund drive raised close to a billion dollars, but it was clear that it was no solution to the expected budget strain. The proposal to raise \$450 million more in taxes from an already heavy taxed population marked the first real effort to extend the burden of paying for the massive influx of Soviet Jews to the Israeli public[Ref. 24].

The package worked included cutting the minimum wage by 20 percent for the employees first 6 months of work (from \$521 to \$417). The government also proposed to place a 20 percent tax on certain types of interest earned by pension funds. Also included was a 5 percent surcharge on income taxes for all Israelis and raising the Value Added Tax (Vat) to 18 percent. But these plans could not resolve the forthcoming deficit and the Israeli government had assessed that it will have to generate some \$30 billion to accommodate the immigration. (Without causing severe setbacks to the standard of living which would accelerate emigration and cause social unrest)

The amount needed to absorb the immigrants takes into account the direct expenditure and the indirect cost to transform the economy so it can accommodate the large influx in labor supply.

Upon arrival a typical family of three is initially given \$450 by the government to rent a hotel room or cover initial expenses, as well as \$650 for "immediate household needs". The family also gets monthly stipend for rent and living expenses totalling \$700 a month - a sum that exceeds the average Israeli monthly take home pay - and tax exemptions on the purchase of cars and appliances.

This adds up to about \$11,000 in government funds for a family during its first year in the country, along with free enrollment in a six month long intensive Hebrew course. The subsidy can continue for two years or more if the family has trouble finding employment[Ref. 25] .

Having calculated the projected budget deficit Israel set on acquiring favorable loans. The government requested the United States for a loan guarantees in order to receive low interest loans from international banks.

The government presented its case through the Jewish congressional lobby in Washington and professional corporations such as Solomon Brothers (Israel: A Misunderstood Credit, Sovereign assessment group, September 1991) and Furman Selz (Israel: The next Economic dragon, International Research, Joel Y. Maryles, November 11, 1991)

The case presented showed the Israeli economy's five percent growth in 1990 and 1991 as indicative of its potential. Net external debt has dropped by over \$2 billion since 1988 to \$16.2 billion in 1990. Mean while, the country's debt to export and debt to GNP ratios, key indicators of a nation's ability to maintain debt service[Ref. 26], have improved in recent years.

A GAO report in February 1992 [Ref. 27] concluded that the Israeli government will likely be able to fully service its external debt and continue its past record of payments. The report also commented that there is a substantial risk which would be minimized if Israel fully implement its absorption plans. These include the rapid achievement of structural reforms and a strategy to employ immigrants in the private sector, not in the public sector or in public works programs. However in 1991 New York based 'Standard and Poor' gave Israel a low investment grade rating (triple B minus) on long and short term government debt that would not be backed by the U.S. Government.

Concurrently US officials were concerned of the need to back Israeli loans under a provision of a 1984 US law in which assistance to Israel is not allowed to drop below the amount Israel owes the US in repayment for past debts.

These, plus a history of slow repayments of foreign debts by Israeli banks, has prompted the Export-Import Bank, a US agency that promotes foreign trade, to give Israel a "D" level credit rating on an A-through-F scale [Ref. 28]. As the Israeli economy continued to improve through 1992

the change in Israel's government allowed Prime Minister Rabin to capitalize on a fertile political field and acquire the US loan guarantees in his meetings with President Bush and senate and congressional leaders [Ref. 29].

The Israeli budget for 1993 was ambitious in its deficit reduction proposal. Meanwhile the economy is on a five percent a year projected growth, inflation was held under 10% in 1992 (for the first time in over a decade) and unemployment is around 10 percent. Most of the unemployed are immigrants whose rates are around 30 percent.

C. THE CULTURAL ASPECT

Israel's absorption policy is directed toward fast economic and cultural assimilation. Immigrants arriving in Israel receive a combined package.

1) Citizenship - Issued virtually at the airport. (Although it is not an actual citizenship it is identical de facto and includes a voting right).

2) Housing - the immigrants are facilitated with housing or receive a housing grant.

3) Living allowance - The immigrants receive a monthly living subsidy for at least a year, until they find work.

4) Language skills - Immigrants receive free extensive language tuition for a period of up to six months.

5) Vocational training - Free on demand according to vocation needs.

6) Cultural training - Free and public initiated courses and tours relating to Judaism and Israeli culture.

(The economic package was also discussed in the previous sub-section).

Even though the Israeli public was politically divided on many issues there had always been a consensus regarding immigration. In that respect Israelis had always been supportive of immigrants, willing to make economic and social sacrifices. The many preceding waves of immigration had not caused serious social unrest in spite of objective justification (job displacement, price hikes, taxation etc.)

Israel has always been a country of immigrants with highly diversified geographical roots of origin. This facilitated absorption of new immigrants since there was always a large group of established population with which the immigrants could align themselves and emulate.

The 90s immigrants are not different in many respects such as family ties, language skills and ethnic similarities to a large Russian oriented veteran population. There is a marked difference however, in their Jewish identity.

Many of the immigrants are not familiar with Jewish culture and customs, and a substantial number of them are non-Jews who have married Jews. Their motives for immigration are economic, and as such, their level of effort to assimilate will be proportional to their economic success and perceived chances of emigration to a better economic future elsewhere. Nevertheless according to a survey conducted by the Israeli Ministry of Education quoted

on a bulletin of the Israeli Consulate in New York, Feb. 16 1993 #1371), 54 percent of the immigrants studied Hebrew in the former Soviet Union prior to their immigration. This suggests a conscientious effort to assimilate in the receiving country.

Many Israelis became worried that a cultural and political shift will alter a delicate balance. Some rifts along ethnic lines became visible when protestors took to small scale demonstrations. The immigrant influx coincided with rising unemployment and their subsidies created a congested rental housing market leading to high prices.

An interview with an Israeli unemployed truck driver of Sephardic orientation is typical of the frustration of the lower economic class;

'We're being discriminated against,' said Nissim. 'The new immigrants receive government subsidies for rent, while we who were born here, served in the army and raised a family, get nothing. We want the same thing they're getting; equal rights.' 'My parents lived in a transit camp when they moved here from Morocco,' said Dorit, a mother of three. 'Now we and our children are back in the same conditions.' [Ref. 30]

The politically divided Israelis became aware of the effects of the immigrants on the status quo between left and right, as well as the cultural implications. A prominent Jewish philosopher David Hartman commented.

This is an immigration of people without a historic identity. After 70 years of living under communist rule, they have no Jewish roots. So it's an open ball game. They can go right, they can go left, they can become fanatical or apathetic. The question is, how will they build their Jewish identity here? Who will tell them the story, mediate their memory, the right or the left? The Zionists or the ultra-Orthodox. What story they

believe could be decisive for the future of the country. But if we don't make it meaningful, they won't stay[Ref. 31]

The potential for unrest has not materialized perhaps because the immigrants were not threatening the more established predominant middle class. They were entering the labor market vacated by Arab workers from the territories who held menial jobs in construction, restaurants, hotels and public utilities.

A preliminary study on veterans' attitudes was done by Dr. Eli Leshem of the 'Social Work School' in the University of Tel-aviv published in october 1992. It showed that according to research and polls conducted, there is a basic resentment toward the immigrants in the Israeli public.

The perceived consensus with respect to the desirability of the immigration is superficial in some parts of the population. Behind the positive remarks there is often no will to personal commitment or living standard sacrifice for the benefit of absorption. The immigrants are perceived as a low priority item on the governmental aid list.

The latter findings are exemplified by the refusal of the trade unions to accept taxation and lower minimum wages as a package to assist in the immigration absorption. Although this can be viewed as a mistrust between government and unions, the latter are quoted as saying repeatedly that they, too, are happy that so many Soviet Jews are choosing to move here [to Israel]

. But at the same time, they say they do not want to suffer economically as a result of the influx of newcomers [Ref. 32].

Culturally the immigrants assimilated at a fast pace. They acquired language skills and did not tend to segregate themselves, geographically or otherwise. Russian newspapers, theater and especially musical ensembles sprouted where they settled. The large numbers of musicians translated into cultivation of classical music which caught with to the native population.

Thus somewhat surprisingly the perceived tensions and emigration expectations did not materialize.

The slowdown of immigration was due to economic hardships and that eased the strain on both the housing and labor market. This coupled with fast assimilation and positive visible effects of the immigrants subdued the potential cultural conflicts in the Israeli society.

VII PROJECTION OF ECONOMIC AND SOCIAL PERFORMANCE

A. PUBLISHED PLANS

The present government has formulated a strategy for immigration absorption. The plan is basically an attempt to implement the previous government's espoused programs. This in turn date back to the 1985 economic program initiated by then Prime Minister Peres (the plan is discussed in Chapter IV).

However, as portrayed, it is doubtful whether the government will be able to carry its plan for the same reasons the previous one has failed namely - the structure of Israeli politics might prevent a restructuring of the economy.

The governor of the Bank of Israel is a strong and independent figure in the Israeli economic system (compared to other countries). His philosophy and reflections can convey some of the thought and realities expected in the future.

The present governor's goals were mapped in a report in Business Week [Ref. 33].

- 1) Reduce inflation to the 3.5 percent level of Israel's trading partners
- 2) Open protected financial markets to foreign competition and allow citizens to open bank accounts abroad.

3) Get state to slash spending on housing and wages and boost outlays for transportation, telecommunications and education.

However the governor's (Mr. Jake Frenkel) sober remarks in the introduction to the bank of Israel 1991 annual report show a somber frustration:

... This year's economic performance appears inadequate in view of the need to expand and to absorb immigration, and the economy does not yet appear to be on the track for sustainable growth. Such growth should be based on utilizing the relative advantage of Israel's human capital and realizing the potential offered by large export markets. The government's task is to improve conditions for the business sector, enabling it to realize its growth potential. This requires the consistent implementation of measures intended to set the economy on the right path, increase immigration and slow down inflation. First and foremost budget priorities must be reordered, with the significant expansion of infrastructure investment and reduction of business sector taxes. At the same time reforms must be speeded up in order to improve the functioning of the markets and reduce costs to manufacturers. Some of these steps require legislative action and procedural simplification, while others involve expenditure. Since there should be no deviation from the deficit [reduction] path to which the government is committed, a significant reduction of the budgetary expenditures is required. This is possible only once budget priorities are reordered - something that is needed now more than ever.

(Bank of Israel annual report 1991, Jerusalem, May 1992)

B. ECONOMIC POLICY PLANS

In examining the Israeli government economic policy presented by the Likud Finance Ministry for the 1992-1993 period and the Labor finance Ministry for 1993-1995 there are no extreme ideological differences. The government policy plan is a joint paper[Ref. 34] published by the Bank

of Israel, the Ministry of Finance and the Ministry for Economic Planning (a non influential ministry created in the past to accommodate parochial interests at the time).

The economic policy will signify a change in the order of priorities.

1) Renewed initiative of investment in the business and public sectors.

2) Increased rate of exports .

3) Sharp decrease in public expenditures for private dwellings.

(Public expenditure on housing was discussed in Chapter VI. A)

The economic challenge perceived, is to absorb most of the labor supply by the business market. It is only possible by rapid expansion of the latter and requires investments and developments of export markets. Most of the budgeting will come from reallocation of housing appropriations.

Keeping internal and external stability is a constraint on the economic plan. The immigration absorption caused instability in public sector budgeting and budgetary deficit. This instability is expected to continue in the next several years. The Loan guaranties should be used to finance the immigration absorption and as moderately as possible. It is clear that use of loans for other needs will lead to solvency problems in the future. The main items to receive budgetary priorities are infrastructure and education.

C. BUDGET PLANS

Planned expenditures for 1993 are 88.7 billion Israeli Shekels (about \$31 billion), not including loans repayments. This compares with 91.1 billion Shekels in 1992 which is a 2.6 percent real reduction. The planned domestic deficit will be 5.9 billion which is about 3.2 percent of GDP.

Infrastructure investments will increase by 30 percent for 1993, mainly in roads, sewage and water systems. Investments in power systems, air and sea transport will increase by some 22 percent.

Education subsidies will increase mainly to finance immigrants and the expected addition of students.

Taxing policy forecasts tax reductions of 1.2 percent. Liberalization and equity issues are to be addressed. In January 1993 barriers defending domestic manufacturers from competing imports were to be eliminated (this relates only to EEC or US based goods). Other reductions are planned in an effort to lower domestic prices which should limit the pressures for wage increases. In turn it will improve employers and exporters profitability.

D. STRUCTURAL CHANGES

Structural changes are designed to increase the competitiveness and productivity of the domestic market. This by lowering subsidies, controlling government services, Anti-trust enforcement, and labor law changes. The latter

include abolition of cross over industry wide wage hike agreements, minimum wage reductions and a reform in the labor market management procedures.

The next item is privatization and competitive public service management. Privatization is expected to bring some \$1 billion in FY 93.

E. MONETARY POLICY

The main policy objective is the creation of a stable monetary market and controlling inflation. Creating credibility in order to attract outside investments and promoting business sector growth is the target. The US loan guaranties are expected to lower interest rates but using them in other than economically viable investments will only exacerbate the debt situation

Critique of the government policy should be centered not on intentions but on strategies of implementation. So far only incremental strategies are seen. The pace of change is very slow and as long as the mechanisms of impediment are not removed, the variance between plans and reality is expected to result in "muddling through".

VIII PROPOSITION FOR STRATEGIC PLANNING

Jeremiah, 3.18:

In those days the house of Judah shall walk with the house of Israel, and they shall come together out of the land of the north to the land that I have given for an inheritance unto your fathers.

Realizing the biblical vision is no simple task. It might take pragmatic visionary leadership to successfully assimilate those who came from the "land of the north" as the prophet Jeremiah professed. The immigration wave from the former Soviet Union has come to Israel at a crucial time in its evolution. The Middle East undergoes political and geo-economical changes and Israel is one of the key players. The internal changes in Israel are numerous and include the political, social, cultural and economic disciplines. As the immigrants enter the Israeli environment they become at once participants in the struggle to shape the country's future. Their very presence and attributes make them both a catalyst to change and a challenge to existing stake holders. They become an important factor in a multi-variate formula which will result in a new Israeli entity in the future.

This chapter will use strategic planning methods to formulate a proposal for policies, which will capture the human potential embodied in the immigrants and utilize it to Israel's benefit.

The basic method will be a SWOT (strengths, weaknesses, opportunities and threats) analysis followed by strategy formulation suggestion[Ref. 35]. Although the thesis is focused on the immigration question, it cannot be divorced from other facets of life in a society, and the resulting implications on other disciplines.

A. STRENGTHS

1. EDUCATION LEVEL

The most impressive traits of the immigrants is their education level and their occupational composition. For reasons discussed later in this chapter, the exhibited characteristics of the immigrants conforms to basic Jewish culture which emphasizes learning and inquisitiveness.

Table 3.3 (chapter III) shows that some 57 percent of the immigrants have 13+ years of education. This coupled with the high labor participation rate already exhibited by the immigrants (Table 5.1) suggests a composition of a highly educated work force. Superimposing those figures on the work force structure in Israel (see Table 4.2) which was second only to Japan in terms of rates of engineering graduates, we can conclude that Israel has at present the most highly technically educated work force in the world (this presupposes that years of education truly reflects a level of education).

2. OCCUPATIONAL COMPOSITION

The immigrant's occupational composition corresponds to their educational background. As Table 3.4 shows, 75 percent of them are professionals or technical and related. Of these, 25 percent are engineers, 1.6 percent scientists 6.3, percent physicians and 15 percent technicians. Even if we allow for some downgrading in the practical usability of the occupations the added work force can still be considered highly valued.

3. KNOWLEDGE MARKET ENVIRONMENT

Israel's academic and research background is advanced by international standards. Networks for applications and trade in the knowledge markets already exist in the forms of publications, patent recognitions, and global flow of scientific information.

As shown in Figure 4 (Chapter IV), Israeli researchers are leaders in scientific publications in terms of comparative rates. This suggests a developed networking of the knowledge industry. Another hidden aspect of networking is the social ties with Israeli and Jewish scientists and entrepreneurs world wide. Although difficult to quantify there are a substantial number of Israeli scientists who emigrated (mainly to the U.S) in the past. Jews Have traditionally occupied a large share of the scientific and entrepreneurial community in the west (mainly in the U.S). These make for easier communications through cultural homogeneity and empathy.

The supportive communication infrastructure is an important advantage. Although not as advanced as the coverage in the U.S, it is sufficient to allow easy flow through computer networks which have become a major medium for information flow, and traverse geographical (and time zone) constraints.

Earnings comparisons make Israeli technical work force very competitive in the scientific and techno-engineering field. Salaries in Israel are about a half of those in the U.S. (start up costs as a liability will be discussed under the weaknesses subsection).

B. WEAKNESSES

The inherent weaknesses of the Israeli economic and social systems have two dimensions. It is difficult to let go of policies and solutions which are perceived in Israel as having been paramount in the successful creation of the state and its physical survival in a sea of hostility. The underlying reasons are discussed in Chapter II subsection L. The paradigm of the power of centralization is hard to change. Nevertheless the immigrants bring with them the realities of the failure of the Soviet system which was perceived as powerful. This may help in loosening the hold.

A second dimension is the entrenchment of vested interest groups who have high stakes in preserving the present situation. These are economic and political groups who have been able to manipulate the system to their

advantage. These will be difficult to confront and may pose a greater challenge than the first dimension.

1. ECONOMIC STRUCTURE

A quote from a recent article in the New-York Times succinctly points out one of Israel's main economic weaknesses; [Ref. 36]

After China's embrace of some free market policies and then communism's collapse in Eastern Europe, Israel has the dubious distinction of being derided by free market proponents as one of socialism's last bastions.

Perhaps this is an exaggeration, but it does convey a major impediment to economic progress in a world which is turning ever more toward global market systems.

The cumulative effects of high tariffs and barriers on imports make raw material costly and promote non-economic decision making to concentrate on the domestic market instead of finding ways to compete in the international market. The tax system is such, that direct taxes reach 45 percent and Value Added Tax is at 18 percent. In addition there are high social security costs imposed on employers and bureaucratic restrictions which have to be overcome by entrepreneurs. All these are enforced by an inefficient bureaucracy which is an economic public burden in itself.

Therefore startup costs and low profitability chances are discouraging both investments and economic initiative.

2. THE POLITICAL SYSTEM

As outlined in Chapter VI.A, the Israeli political system suffers from factionalization which leads to incompetence in decision making and implementation processes. In that atmosphere interest groups aggrandize power and protect vested interests. The interest groups are diverse in their orientations but can be categorized into three main stake holder denominations.

The Trade Unions manage to control wages and labor laws. They make wage flexibility and occupational mobility extremely difficult and thus impede the natural response of the labor market to fluctuations and changes. Those responses mandate geographical relocations and productivity enhancements through the use of eager highly skilled workers (willing to work for low wages).

The second group is the Union of Industrialists which monopolizes the domestic market. Its interests of high entry barriers caused the government to adopt only a slow plan of import tax reductions. As an example - taxation of textiles from countries with which Israel does not have a trade agreements, is 110 percent. It is planned to be phased out by the year 1998. However due to pressures the Finance Minister agreed to postpone the restrictions until the year 2000.

To this The Bank Governor - Mr. Frenkel commented;

...The policy was publicly proclaimed as a seven years long phase out of tariffs...the postponement will create a precedent in which the plan can be viewed as negotiable...supporting non-economic investments in activities not profitable to the economy, and whose gains to the industrialists are due to the artificial barriers...[Ref. 37]

A third powerful interest group are the political parties which make up the coalition. Having little loyalty to the prime minister they are often looking for opportunities to manipulate the system for the narrow interests of their constituents. They can often force the government into 'pork barrel' spending. Their accountability is usually to their narrow field of constituents (mainly ultra religious followers) who happen to be non-zionists (and have little interest in the welfare of the state)¹.

Thus we see that political instability leads to low confidence in economic planning, and reduces the attractiveness of long range investments.

3. SECURITY

Political and security conditions impede the flow of capital to Israel. These include the persistence of a state of war with the Arab countries, the boycott and the Intifada.[Ref. 38] Investors are reluctant to place their money in volatile regions. Although a catastrophic war is no longer an immediate threat, potential investors perceive Israel as being risky and non-competitive (*ceteris paribus*).

¹Although this point warrants explanation, it is beyond the scope of this work.

4. GEOGRAPHICAL SEGREGATION

The geographical segregation from potential advanced markets makes competition harder on Israeli goods and services. The scale of Israeli domestic market is not sufficient to generate large scale production. this constraint is expected to diminish as the global market changes but it is nevertheless not negligible.

C. OPPORTUNITIES-THE CHANGING GLOBAL ECONOMY

In Alvin Toffler's 'Power Shift' (1990) a global change is envisioned following the information revolution. The proliferation of knowledge through media systems caused a fundamental change in the global economy. The creation of wealth is no longer governed by material and muscle but by people acting on information and information acting on people.[Ref. 39]

In the post industrial world money flows to where information and production can bring about superior goods and services. Physical boundaries are no longer important in decision making. Goods are produced with components supplied world wide. Producers gather data and make decisions with suppliers worldwide being able to electronically compete and bid across continents.

The new wealth is characterized by the following attributes (adapted from 'Power Shift' (Alvin Toffler 1990) and class notes from Prof. William Haga's 'Information Systems' course, NPGS Fall 1992)

1) The system for wealth creation is increasingly dependent on the exchanges of data, information, and knowledge.

2) The new system goes beyond mass production to flexible, customized production (even customized products at costs approach those of mass production).

3) Producer and consumer are reunited in the cycle of wealth creation. the customer contributes not just money, but market and design information vital to the production process.

4) Number and variety of organizational units multiply, increasing the number of transactions and information which must be generated and communicated.

5) Conventional factors of production - land, labor, raw materials, and capital - become less important as symbolic knowledge is substituted for them.

6) Goods and services are modularized and configured into systems, which require a multiplication and constant revision of standards.

7) Slow moving bureaucracies are replaced by small work units, temporary or "ad-hocratic" teams. Hierarchy is flattened or eliminated to speed decision making. The bureaucratic organization of knowledge is replaced by free - flow information systems.

8) Workers become less and less interchangeable. They often own an irreplaceable share of the 'means of production' in their heads.

9) The new hero is no longer the blue - collar worker, a financier, or a manager, but the innovator who combines imaginative knowledge with action.

10) Powerful microtechnologies make it possible to do locally, what previously could be done economically only on a national scale.

Points 3 - 10 are well suited to the attributes present in the Israeli labor force. It has the potential to thrive in the new global market with its abundance of qualified professionals.

D. THREATS

The threats present are parallel to the weaknesses. If Israel is unable to reach a peaceful coexistence with its neighbors it will have to withstand severe setbacks. Primarily it will have to expend large resources toward the military. This includes both financial and manpower resources denied from the business sector. An immediate consequence will be the containment of capital flow by outside investors who would prefer a more stable environment.

Underlying political weaknesses could be another threat. They lead to policy instability and might freeze or change the current trend of economic reforms. Lack of constancy of purpose may lead to frequent changes in economic policies and drive away long term planning and investments. It makes interest groups and lobbyists more powerful in their dealings with a bureaucracy and undermine credibility.

E. A VISION

The Israeli state has found it difficult to formulate a vision since 1967 due to lack of consensus in the population on many issues. As mentioned before, political and cultural factionalization made it difficult for Israeli leaders to follow other than incremental and reactive policies. As the geo-political and economic forecasting becomes clearer, a consensus in the Israeli public can be expected to crystalize.

In the geo-political context, it is becoming clear that a settlement of the Arab - Israeli conflict is possible. The advantages of peace and the costs associated with territorial concessions are becoming more tangible. This helps in moderating extreme views on all sides of the political map.

In the economic context Israelis are learning that their economic system is a burden on their future. The influx of immigrant job seekers, make it clear that the choice is either to burden the public sector with creating jobs, or let the private sector create them. As the burden of public sector financing would be transferred to the Israeli public, the latter seems to recognize the urgency of expanding the private sector.

Politically there is a consensus in the perception that a change in the election system should take place making the executive more powerful and accountable. Elimination of the inherent weaknesses - which give small

factions and interest groups too much power with little accountability. This is on both parties' (Likud and Labor) agenda

But these visions are incremental in their nature and will take their effect in a span of years or decades. The arrival of the immigrants, their pressures and opportunities, call for a more decisive agenda which can unite the Israelis and move them to a new sphere

The characteristics of the immigrants coincide with basic Jewish Traits. If there is one fundamental vision which was and is central to Jewish culture, philosophy and practice, it is the primacy of learning and knowledge. The basic Jewish philosophy espouses that the world is a mechanism of reason and is decipherable. It is through the pursuit of knowledge that one can acquire wisdom which will enable him to understand his environment and influence his destiny. A person can reap the benefits of his efforts in his own life time and therefore entrepreneurialism is worthwhile.

Tracing the vision some thousands years back it is said in the Bible, [Deuteronomy 5.1]:

And Moses called all Israel and said unto them, Hear, O Israel, the statutes and judgments which I speak in your ears this day, that ye may learn them, and keep and do them.

The perception that knowledge and understanding become antecedent to faith developed a "wisdom" movement in the old time [Ref. 40]

Learning became a pivotal point in Jewish philosophy and culture throughout the ages to this day.

Perhaps the perception is best captured in the words of the Bible, Proverbs 1.1-6:

The proverbs of Solomon the son of David king of Israel; To know wisdom and instruction; to perceive the words of understanding; To receive instruction of wisdom, justice, and judgment, and equity; To give subtilty to the simple, to the young man knowledge and discretion. A wise man will hear, and will increase learning; and a man of understanding shall attain unto wise counsels.

Proverbs 2.3-5:

Yea, if thou criest after knowledge, and liftest up thy voice for understanding; If thou seekest her as silver, and searchest for her as for hid treasure; Than shalt thou understand the fear of the Lord, and find the knowledge of God.

And then the reward, Proverbs 4.7-9:

Wisdom is the principal thing; therefore get wisdom: and with all thy getting get understanding. Exalt her [wisdom], and she shall promote thee: she shall bring thee to honor, when thou dost embrace her. She shall give to thine head an ornament of grace: a crown of glory shall she deliver to thee.

The underlying philosophy of the importance of learning, the acquisition of knowledge, is as powerful as ever in Jewish thoughts today. Therefore it could be counted upon to be a focus for consensus to capitalize on. The advancement of knowledge and knowledge based industry could be taken out

of context of the usual constraints on changes, and elevated to a level of national destiny for the Israelis.

Israel could strive to be a focus of technology and knowledge driven industry. The basic infrastructure for this already exists. The abundance and concentration of highly skilled professionals allow an intellectual synergy resulting in high intellectual productivity.

The major fields would be: pure R&D, industrial and applied R&D, innovative collaboration with manufacturing and medical research and treatment centers. These will have the ability to attract capital and long term investments from outside sources purely from a business interest standpoint. In conjunction, industries could capitalize on the knowledge and translate the knowledge into goods and services, benefitting from the geographical proximity to the knowledge base.

The ideal of Israel as the "Silicon Valley" of tomorrow seems to be only a question of freeing the potential from constraining policies, and not requiring extraordinary initiatives.

Thus the proposed vision is to make Israel a focal point of knowledge disseminating innovations for the use of technology for the betterment of mankind. It will integrate and accommodate the values of Judaism and the potential capabilities of the Israeli labor force.

The proposed vision is best captured by George Gilder in his book 'Microcosm':[Ref. 41]

...The third great manifestation of the overthrow of matter is the impact of this technology on the world of business. By overcoming the constraints of material resources the microchip has devalued most large accumulations of physical capital and made possible the launching of global economic enterprises by one entrepreneur at a workstation. with the overthrow of the constraints of material scarcity, gravity and friction, large bureaucracies in government and business lose their power over individual creators and entrepreneurs. The fourth phase of the overthrow of matter is the collapse of the value of natural resources and territory in determining the distribution of power among nations. **The microcosms of science, technology, and enterprise have converged in global quantum economy that transcends all the usual measures of national power and wealth. The most valuable capital is now the capital of human mind and spirit².**

F. PROPOSED STRATEGY

The 20th century can be seen as the age of failed experiments in socialism - including its fascist, communist and welfare variants. While the task of businesses is to take risk, the job of government is to be predictable. government policy must keep hindrances to enterprises at a minimum and tax penalties for the rewards of risk-taking must be low [Ref. 42].

The strategy for achieving the proposed vision would separate the economic and social policies dealing with the knowledge and technology based industries, from other economic disciplines. This would be implemented in the various forms of structural entities.

1) Education - As the universities are the breeding grounds for knowledge dissemination agents (students and teachers/researchers), public

Emphasis not in the original.

support for the higher academic institutions should grow. As shown on Figure 4 in Chapter II, the universities are proving highly productive, as far as published research is concerned and should be encouraged to continue the trend.

2) "Existential knowledge zones" - Presently there is an idea of a "free export processing zone", an industrial area where manufacturers are liberated from normal taxes and bureaucratic regulations[Ref. 43]. This idea could be carried to an existential "knowledge zone". The industry of ideas including high tech and R&D institutions would be liberated from the taxation and bureaucratic impediments to productivity. These include importation of technology related materials such as computers, related hardware, telecommunication equipment, etc.

3) Labor policy - removal of labor hiring constraints and complete wage flexibility. This type of arrangement already exists in one of Israel's leading technological corporations - Elbit Ltd. This will allow capitalization on the immigrants' capabilities.

4) Tax policy - While a preferential personal tax policy is inapplicable for social equity reasons, corporate tax on revenues should be greatly reduced to encourage entrepreneurs. Value Added Taxation of knowledge based goods should be eliminated. This will greatly reduce start up costs and will help proliferation of knowledge based technologies in the public and private sector.

5) Bureaucratic barriers - Although seemingly contradictory, in order to remove bureaucratic barriers a strong institutional mechanism will be needed to support the vision of the knowledge industry. Given a latitude and mandate through legislative and executive power, it should be able to overcome existing hurdles by supporting R&D investments through direct subsidies and providing a coherent agency for entrepreneurs to rely upon.

6) Role of government - The flourishing of any industry depends on its ability to maneuver and initiate. This can happen if an adequate communication infrastructure exists. The government should invest in transportation and communication infrastructure. This will generate lower costs and higher productivity by lowering the friction imposed on the movement of ideas people and goods.

7) Legislation - Regulation of patents, anti-trust policies, and general intellectual property rights have to be revised so they can yield the greatest social value. This means the dissemination of ideas and prevention of waste in duplicate R&D while retaining proprietary rights [Ref. 44].

The expected benefits of the proposed strategy in the short term could be the creation of jobs commensurate with the characteristics of the immigrants. It would lead to lower unemployment within the immigrant population and lessen the rate of occupational substitution - and the related losses stemming from the need for vocational retraining, and potential loss of viable knowledge.

In the long run it will galvanize the industry towards a competitive position in the world economy and capitalize on Israel's strengths which match global economic demands. It will also allow for a smoother assimilation of the immigrants by capitalizing on their strengths. The policy has a financial potential for economic improvement which is well worth the risk (though very difficult to quantify).

The problems of the proposal are in the political and social realms. In the short run it will create discontent among other industries and interested parties which will resent the inherent inequity in the policies. Foot dragging and delay tactics are expected at different levels of the bureaucracy as some stake-holders will lose power bases and strongholds. Public support is also difficult to anticipate as the policies tend to favor the haves versus the have nots.

In the medium to long run a dual track economy is expected to develop. Abuse of the system will undoubtedly occur and create suspicions, which could only be alleviated if it was made clear that the whole economic structure is to follow suite.

In the long run the knowledge industry's development will contribute a growing share to the common society in the form of labor and capital infusion through salaries and taxes. Thus the negative effects should subside. In turn foreign capital can be expected to flow once the potential is realized and investors feel secure that policies will be consistent.

The problem of overcoming political opposition (in all its forms) needs to be addressed by a show of leadership. Only a national consensus could overcome inherent barriers to change. a consensus could be built by bringing the issue to a public debate and with the support of the media and key intellectual and political figures.

G. CONCLUSION

Israel has been given a rare opportunity to transform itself in a revolutionary manner without having to go through the pains of turmoil and violence usually associated with such changes. The underlying paradigm of the power of centralization has brought the Israelis from the depths of frustration and despair in this century to actualizing statehood and relative political and economic success. It is that underlying paradigm which has become a burden and liability.

The influx of immigrants coincides with the changes in global economics and easing of tensions in the Middle East. The immigrants are no Trojan horse. They bring with them human and cultural capital which can help transform Israeli society to one which is entrepreneurial and innovative. In capitalizing on Israel's strength the Jews may be able to become the beacon their heritage had professed.

Whether the Israelis are capable of rising to the occasion remains to be seen.

LIST OF REFERENCES

1. *Encyclopedia Britannica*, p. 1064, 1974 Edition, Vol. 9.
2. *Multi yearly budget plan 1993-1995*, p. 48, 13th Knesset budget proposal, Israel Ministry of Finance, October 1992.
3. Yoram Ben Porath, *The Israeli Economy; Maturing Through Crisis*, p. 15, Harvard University Press, 1986.
4. Yoram Ben Porath, p. 27.
5. Yoram Ben Porath, p. 30.
6. *Data on Immigrant Absorption, 1991*, bulletin No. 10, p. 5, Bureau of the Finance Minister, Monitoring Office, Summary, 1991.
7. *The Israeli Economy - Outlook*, Economic Models Ltd., September 1991.
8. Source: The Jewish agency for Israel; Department of Immigration and Absorption, *Immigration and Absorption, booklet # 3, Summary of 1992*.
9. Source: CBS, Abstract, 1990, 1991, and CBS: "Immigrants from the USSR - The first five years in Israel" Special Series No. 682, 1982.
10. 'Behind the headlines, a very sick economy', *Business Week*, p. 48, October 7, 1991.
11. Yoram Ben Porath, pp. 302-317.
12. Simon L. Julian, *The Economic Consequences of Immigration*, Basil Blackwell Ltd, 1989, p.28.
13. Norman Neville R. and Kathryn F. Meikle (1983): "Immigration: The Crunch Issues for Australia," Committee for Economic Development of Australia, Information Paper no. IP8 (August).
14. *Population and development Review*, p. 164, March 1985.
15. *The Wall Street Journal*, p. 1, November 20, 1985.
16. *The Wall Street Journal*, p. 7, December 2, 1982.

17. *Absorption of Soviet Immigrants into the Labor Market from 1990 Onwards; Aspects of Occupational Substitution and retention*. Discussion paper series, April 1991, Karnit Flug, Nitsa (Kaliner) Kasir (The Hebrew University of Jerusalem), Gur Ofer (Bank of Israel Research Department).

18. Haberman Clyde, 'Once-Soviet Jews Again Find Their Way to Israel', *The New York Times*, p. I,3, November 22, 1992.

19. Richmond Anthony and Jerzy Zubrzycki, *Immigrants in Canada and Australia, vol. 2: Economic Adaptation*, Institute for Behavioral research, York University. 1984.

20. *The New York Times*, p. A,8, November 22, 1992.

21. Simon, p.145.

22. Cowell Alan, 'Planners Scramble to Cope', *The New York Times*, p. IV,3, May 20, 1990

23. Diehl Jackson, 'Exodus of Soviet Jews May Alter Israel's Fate' *The Washington Post*, p. A,1, June 10, 1990.

24. Chartrand Sabra, 'Taxes Approved By Israeli Cabinet', *The New York Times*, p. A,6, September 14, 1990.

25. Diehl Jackson, 'Immigrants' lifestyle subsidized', *The Washington Post*, p. A,24, June 10, 1990.

26. Moffet George D. III, 'Resettlement Costs Put Strain On Israeli Credit', *The Christian Science Monitor*, p. 7, June 25, 1991.

27. GAO report to the Chairman, Committee on appropriations, U.S Senate, GAO/NSIAD-92-119 U.S Loan Guaranties for Israel, p. 6.

28. *The Christian Science Monitor*, p. 7, June 25, 1991.

29. *The New York Times*, september 11, 1992.

30. Greenberg Joel, 'Poor Israelis Protest Influx of Soviet Jews', *The Christian Science Monitor*, p. 5, July 18, 1990.

31. Diehl Jackson, 'Exodus of Soviet Jews May Alter Israel's Fate', *The Washington Post*, June 10, 1990.

32.Brinkley Joel R., 'Israelis Go on Strike to Fight a Tax to Pay for Emigre's', *The New York Times*, p. A,3, December 3, 1990.

33.Rossant John and McNamee Mike, 'Can Jake Frenkel work miracles in Jerusalem?', *Business week*, p. 17, August 17, 1992.

34.*National Budget for the years 1993 to 1995*, ISSN 0334 - 4738, Catalogue No. 307429010. Jerusalem, October 1992.

35.Bryson John M., *Strategic planning for public and non-profit organizations*, Jossey-Bass Inc. Publishers, 1988, p.31.

36.Haberman Clyde, 'Rabin Faces Problems Cutting Unemployment', *The New-York Times*, p. A3 , January 8, 1993.

37.'Frenkel: The compromise in the textiles case is an unhealthy signal undermining credibility', *Haaretz Daily*, April 14, 1993.

38.Stein Herbert, 'Israel Strikes Oil', *The Wall Street Journal*, May 21, 1991.

39.Poster, Mark Foucault, *Marxism and History*, Oxford: Polity Press, 1984.

40.Rylaarsdam J.C., 'Hebrew Wisdom', in *Peake's Commentary on the Bible*, pp. 386-390, , Thomas Nelson and Sons LTD. 1962.

41.Gilder George, *The Quantum Revolution in Microcosm economics and technology*, p. 13, Simon and Schuster, New york, 1989.

42.Forstmann Theodore J., 'Free Entrepreneurs to Fix the Economy', *The Wall Street Journal*, March 31, 1992.

43.'Israel in Shift, Backs Free Industrial Zone', *The New York Times*, January 12, 1993.

44.Nelson R. Richard, *Public policy and Technical Progress: A cross-Industry analysis*.

BIBLIOGRAPHY

Asa-el Amos, Israel's New Exodus, *The Christian Science Monitor*, January 22, 1991.

Bank of Israel Annual Report, ISSN 0067-635X Catalogue # 30705-910011, Jerusalem May 1992.

Bank of Israel, *Recent Economic Developments*, # 59 June 1992, #60 September 1992, # 61 December 1992.

Brinkley Joel, 'As Jerusalem Labors to Settle soviet Jews, Native Israelis Slip Quietly Away', *The New York Times*, February 11, 1990.

Brinkley Joel, 'For New Soviet Immigrants in Israel, Hard Times', *The New York Times*, March 9, 1991.

Brinkley Joel, 'Israeli economy is Keeping Many Jews in the USSR', *The New York Times*, May 5, 1991.

Chartrand Sabra, 'In Promised Land, Jobs Don't Match the Dream', *The New York Times*, June 21, 1991.

Chiswick Barry R. 'Immigrants and Immigration Policy' In William Fellner (ed.), *Contemporary Economic Problems*, (Washington DC: American Enterprise Institute), pp. 285-325.

Cowell Alan, 'Many Emigre's, Much hope (will the Jobs Come?)', *The New York Times*, May 16, 1990.

Diehl Jackson, 'For Israel, Wave of Soviet Immigration Brings Promise and Problems', *The Washington Post*, January 21, 1990.

Diehl Jackson, 'Immigration Has Israel Awash in Scientists', *The Washington Post*, June 5, 1991.

Diehl Jackson, 'Immigrant Influx Tests Israel's Economic Approach', *The Washington Post*, September 8, 1991.

Diehl Jackson, 'Israel's Immigration Slips', *The Washington Post*, December 29, 1991.

Feurwerger Marvin, 'Why Shamir May Be Willing to Deal', *The Christian Science Monitor*, July 27, 1990.

Ford Peter, 'Immigrants Strain Israeli Welcome' *The Christian Science Monitor*, January 3, 1991.

Ford Peter, 'Emigre's Flood Israeli Job Market', *The Christian Science Monitor*, July 29, 1991.

Ford Peter, 'Soviet Jews Bring Few Ties To Jewish Traditions', *The Christian Science Monitor*, July 30, 1991.

Ford Peter, 'Soviet Jews in Israel Seek Voice With New Party', *The Christian Science Monitor*, February 14, 1992.

Ford Peter, 'Citizenship Boot Camp for Israel's Russian Immigrants', *The Christian Science Monitor*, August 31, 1992.

Government Finance Statistics Yearbook, Volume XVI 1992, 1992 International Monetary Fund.

Greenberg Joel, 'Poor Israelis Protest Influx of Soviet Jews', *The Christian Science Monitor*, July 18, 1990.

Haberman Clyde, 'Israel Plans Bog Deficit', *The New York Times*, September 4, 1991.

Hoffmann Roald, 'Soviet Emigre Talent: A Windfall for U.S Employers', *The Wall Street Journal*, June 24, 1991.

Holden Constance, 'No American Dream for Soviet Emigre's', *Science*, June 1, 1990

'Israeli Software Makers Are Increasing Exports', *The New York Times*, December 28, 1992.

Loewenberg Robert J., 'Why Prop Up Israeli Socialism', *The New York Times*, June 24, 1991.

Mandel Michael J. and Farrell Christopher, 'The Immigrants, How They Are Helping to Revitalize the U.S Economy', *Business Week*, July 13, 1992.

Marcus Dockser Amy, 'Lower-Paid Russian Immigrants Offer Competitive Edge to Some Israeli Firms', *The Wall Street Journal*, March 4, 1992.

Marcus Dockser Amy, 'Ex-Soviets Are Setting Up Shop in Israel', *The Wall Street Journal*, April 22, 1992.

Maryles Joel Y., *Israel: The Next Economic Dragon*, Furman Selz, November 11, 1991.

Moffet George D. III, 'Some Israeli Jews Resent Emigre's', *The Christian Science Monitor*, February 22, 1990.

Nasar Sylvania, 'Pressure Grows on Aid-Thirsty Israel to Adopt Reforms', *The New York Times*, September 27, 1991.

Nelan W. Bruce, 'Exodus to the Promised Land', *Time Magazine*, February 12, 1990.

Plan of activities in the former USSR, 1993, The Jewish agency for Israel, office of the Chairman of the executive, October 1992.

Purcell F.H. John, *Israel: A Misunderstood Credit*, Salmon Brothers, Sovereign Assessment Group, September 1991.

Rabinovich Abraham, 'Screening Soviet Immigrants', *The Christian Science Monitor*, August 29, 1990.

Report to the Board of Governors of the Jewish Agency, The Jewish Agency, Department of Immigration and Absorption, June 1992.

Rosenberg Carol, 'Influx of Soviet Immigrants Poses challenge for Israel', *The Christian Science Monitor*, February 22, 1990.

Ross Elizabeth, 'Soviet Jewish Families Emigrate to the US in Increasing Numbers', *The Christian Science Monitor*, September 24, 1992.

Rossant John, 'Why Israeli Business is so Fed Up', *Business Week*, June 29, 1992.

Schiffrin Mathew, 'Shalom Comrades', *Forbes*, May 27, 1991.

Silk Leonard, 'Economic Scene, Israeli Blessing and Burdens', *The New York Times*, March 15, 1991.

(Tully Shawn, 'The Best Case for Mideast Peace', *Fortune*, May 20, 1991.

INITIAL DISTRIBUTION LIST

		No. Copies
1.	Defense Technical Information Center Cameron Station Alexandria VA 22304-6145	2
2.	Library, Code 052 Naval Postgraduate School Monterey CA 93943-5002	2
3.	Israeli Defense Air Attache Embassy of Israel 3514 International Drive N.W Washington, D.C. 20008	6
4.	Prof. Roger D. Evered Department of Administrative Sciences Code AS/Ev Naval Post Graduate School Monterey, CA, 93943	4
5.	Prof. Greg Hildebrandt Department of Administrative Sciences Code AS/Hi Naval Post Graduate School Monterey, CA, 93943	2